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Legal Issues of Emission Density Zoning

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FOREWORD

This report examines legal and administrative issues involving the use of emission density zoning (EDZ) and other emission quota strategies as air pollution control techniques.

The technical issues of land-use-based emission quota strategies are discussed in a publication by N.F. Kron, Jr., A.S. Cohen, and L.M. Mele of Argonne National Laboratory, *Emission Density Zoning Guidebook: A Technical Guide to Maintaining Air Quality Standards Through Land-Use-Based Emission Limits*, U.S. EPA Report EPA-450/3-78-048, September 1978.

This legal analysis is intended as a companion volume to the *EDZ Guidebook*, and is directed to air pollution control officials and land-use planners likely to use the techniques described in the *Guidebook*.

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1	Introduction	Jaffe
2	The Clean Air Act and Emission Quota Strategies	- - -
2.1	Federal Policy and The Clean Air Act	Jaffe
2.2	Emission Quotas as Land-Use Strategies	Mandelker & Wafer
2.3	Emission Quotas as Air Pollution Dispersion Techniques	Thomas & Jaffe
3	The Constitution and Emission Quota Strategies**	Mandelker & Taub
4	Emission Quota Strategies and the States	Jaffe
5	Conclusions	all authors
App. A	Provisions of the Clean Air Act and Their Implementation	Mandelker & Wafer
App. B	Selection Criteria, Methodology, and State-by-State Review of Environmental Laws and Regulations Affecting Emission Density Zoning	Jaffe & Thomas

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*ASPO and the American Institute of Planners are merging and will be known as the American Planning Association after 1978.

**Chapter 3 extends the analysis in Mandelker and Sherry, *Emission Quota Strategies as an Air Pollution Control Technique*, 5 Ecology Law Quarterly 401 (1975).

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1 INTRODUCTION

The federal Clean Air Act is the prevailing air pollution control law in the United States; its provisions are enforced by the U.S. Environmental Protection Agency (EPA). As amended through 1977, this legislation requires states to submit to the EPA implementation plans that describe in detail how they will meet and maintain air quality goals. The flexibility allowed the states has led to some innovative suggestions for the best ways to control air pollution.

One strategy used by many states is to set emission limits for individual stationary sources of pollution. Under this approach, a state air pollution control agency lists possible stationary sources of a particular air pollutant and establishes an emission limit that may be based on unit operations (such as heat input or process weight) or establishes an absolute limit, or quota, on emissions for each listed source. Once a particular emission limit is reached, the manufacturer must modify production techniques or install pollution abatement equipment in order to satisfy the state regulations. A per-source emission limit strategy fails to account for incremental effects of several sources (each emitting a legal quantity of pollutants) acting in unison to raise pollution concentrations above a healthy level.

Another emission control strategy that states might use is to limit total emissions from areas of land, rather than from specific sources. An air pollution control agency could establish limits for a land area, based on the types of sources within the area, the anticipated concentrations of the pollutants that the sources would emit, and the relative locations of the pollution sources. Such strategies have been collectively known as "land-use-based emission quota strategies." By limiting the emissions generated from areas of land within a community, an air pollution control agency would regulate emissions from all sources within the designated land area.

When considering land-use-based emission quota strategies for an entire community, an agency can make decisions regarding the land area used as the basis for administration. This administrative decision creates two types of land-use-based emission quota strategies. The first type would administer emission limits for a number of units of land, perhaps as small as hectares or even individual parcels of land. This decision results in a unit-area approach to emission limits known generally as emission density zoning (EDZ).

The second type would administer limits for land areas of a greater size than an individual parcel, and could be called area-wide emission quota strategies. Area-wide emission quota strategies include techniques such as floating zone emission quotas (FZEQ), jurisdictional emission quotas (JEQ), and district emission quotas (DEQ).

The primary purpose of this report is to identify and discuss legal issues pertaining to emission density zoning, the per-parcel land-use-based emission quota strategy. Since many of the legal issues also pertain to the other (area-wide) strategies, the discussion in many instances is general. In describing legal issues that can arise from these land-use-based emission strategies, this report uses the phrase "emission quota strategies" to mean only land-use-based strategies or techniques. While other techniques may also be used as emission quota strategies, these are not examined here.

1.1 DEFINITIONS

Because the names of various strategies, and of the administrative techniques used to implement them, carry specific technical meanings, precise definitions are needed for some of the terms used in this report. Various authors of reports analyzing emission density zoning and area-wide emission quota strategies have defined these terms differently. The terminology and definitions used here are identical to those found in the companion volume to this report, *Emission Density Zoning Guidebook: A Technical Guide to Maintaining Air Quality Standards through Land-Use-Based Emission Limits*, by N. F. Kron, Jr., A. S. Cohen, and L. M. Mele of Argonne National Laboratory, U.S. EPA Report EPA-450/3-78-048 (Sept. 1978).

The Emission Density Zoning (EDZ) Approach

> This phrase, "emission density zoning," has been used to cover a widely varying group of different land-use-based air quality management strategies. [Some authors, for example, use] the term to encompass both emission allocation planning and district emission quotas. For our purposes here, emission density zoning (EDZ) will be defined as an air quality maintenance strategy which requires that emissions of a pollutant be limited to prescribed levels for a selected unit area. Thus, EDZ might be more properly described as a unit area emission quota.

> The pollutant limit would be developed in terms of an amount [of pollutant] per unit area per time period specific to a particular land use category. For example, an EDZ regulation might specify that heavy industrial land uses seeking to construct in a municipality must emit no more than two tons of particulates per acre of lot size per year. Hence, a 100 acre establishment classified as heavy industry would have to certify that it would emit less than 200 tons of particulates yearly before being allowed to construct.[1]

Similarly, as an example of how this approach is area-specific and not necessarily source-specific, consider an area zoned for heavy industry with an emission limit of two grams of particulates per second per hectare. A factory on a 100-hectare site could emit 200 grams of particulates per second, while the same type of factory on a 50-hectare site could emit only 100 grams of particulates per second.

A specific emission limit for a particular pollutant in a specified area could be based on the outcome of the pollutant dispersion modeling and linear programming analysis described in the companion *EDZ Guidebook*. The emission limits would of course be different for different types of pollutants. They might also vary between different regions within the same municipality, depending on meteorological conditions, current air quality, and development patterns.

It also must be remembered that under an EDZ strategy, each hectare of land (and therefore each parcel) within an industrial district can automatically be developed up to a point determined by the emission limit. Every land owner is therefore allocated a certain prescribed emission limit (depending on the land area), and no owner is automatically foreclosed from developing as a result of the use of an EDZ strategy, provided that the use would result in less emissions than the emission limit of the parcel. This may not be the case with some of the area-wide emission quota strategies, defined below, which are also examined in this report.[2]

The Jurisdictional Emission Quotas (JEQ) Approach

> The most broadly conceived of the emission limitation techniques centers on placing lids on the amount of pollutants emitted within defined political boundaries, including municipalities, counties and states....California has been the most advanced in its thinking about [the JEQ approach], where a ceiling would be established on the total amount of

emissions in an air basin and this total allocated to subareas within the basin. Extrapolating from the California experience, it becomes apparent that [JEQ] is a flexible tool which allows local political jurisdictions a great deal of latitude in dealing with air quality problems.[3]

The District Emission Quotas (DEQ) Approach

A step down from [JEQ strategies] is a strategy which limits the amount of pollutants to be emitted during some time period from a planning district within a jurisdiction. Thus, the amount of emissions generated by an industrial zone of 100 acres might be limited to no more than 200 tons of particulates per year. Once the emission limitations had been established for a particular district, new polluting sources would only be allowed if the quota had not been exceeded.

Different kinds of districts, e.g., residential, commercial, and industrial, would be permitted varying amounts of emissions. Through this strategy, "hot spots" could be avoided and air quality possibly maintained.[4]

The Floating Zone Emission Quotas (FZEQ) Approach

As the name implies, the "floating zone emission quota" (FZEQ) concept refers to limitations on pollutants generated within an area of specified size which can be drawn about any specific location within the metropolitan area. For example, air quality maintenance objectives might include a limiting of emissions to 2,000 tons of particulates [per year] within any one square mile of the air quality maintenance area. The use of floating zone emission quotas is best seen when evaluating the impact of a new industrial facility. Given this 2,000 ton per year limitation on particulates within a square mile, then a circle, containing an area of a square mile, could be placed about the proposed location of the new industry, the centroid of the circle. Thus, if the new industry is estimated to emit 200 tons of particulates per year, then the one square mile surrounding the industry must have existing total emissions of no more than 1,800 tons of particulates [per year]. The FZEQ concept was developed for use in Jefferson County, Kentucky.[5]

As stated above, in FZEQ, a new source wishing to locate in an area provides the FZEQ implementing authority with a statement of how much pollutant the source will emit. After determining the emissions from all other sources located in the area where the source wants to locate, the FZEQ authority permits or denies construction based on whether the total emissions near the proposed site are above or below some objectively-set limit for the area. The challenges in FZEQ are (1) determining the size of the area around the source that should be considered in the analysis (e.g., the radius of the circle placed around the new source), (2) determining the quantity of emissions to be allowed in the area, and (3) keeping good records so that the implementing authority knows the emission quota remaining in each area of the region.[6]

1.2 AN OVERVIEW OF LEGAL ISSUES

This study prospectively analyzes some of the legal questions raised by EDZ, especially those related to the Clean Air Act, the U.S. Constitution, and state laws. It focuses on legal issues at the state level for two reasons: (1) inherent power to regulate environmental quality resides with the states in our federalist system of government, and (2) federal efforts to control air pollution are programmed under the Clean Air Act to activities by the states. The allocation of authority among federal, state, and local governments is well established and is not likely to change in the foreseeable future.

Examination of the Clean Air Act and its amendments indicates that EDZ probably would be upheld as a valid technique under this federal legislation.

From a legal standpoint, federal constitutional issues override state issues, and they undoubtedly will be encountered in implementing EDZ. Two provisions are of special concern, and each must be considered in relation to the specific EDZ provisions. The 14th Amendment to the Constitution provides that states shall not deprive any person of property without due process of law. Judicial interpretations of this due process clause have evolved to mean that states can exercise the regulatory provisions of the police power only to the extent that they further a legitimate state purpose, are not implemented in a capricious or arbitrary manner, and do not so restrict use of property that no reasonable use for it remains. A regulation that does not satisfy these three criteria is invalid. The issue in the EDZ context is whether limiting emissions on a per-parcel (area-wide) basis would impose such an onerous burden that it denies individuals due process of law. No formula exists to determine what constitutes a reasonable use of property, and this determination must of necessity be made on a case-by-case basis. The trend in judicial decisions is toward upholding increasingly restrictive limitations on private use of property where the countervailing public benefits are clear. An objection to EDZ on due process grounds should not prove to be an insurmountable barrier to its implementation.

The 14th Amendment also provides that states shall not deny any person the equal protection of the laws. Simply stated, this means that classes of persons cannot be discriminated against if the classification is irrelevant to achieving a legitimate state goal. State legislatures are presumed to have acted within the constitutional limits even though some inequality might result from their action as long as a reasonable justification for it exists. For our purposes here, this issue would arise when an emission quota had been filled on a "first-come, first-served" basis, thus precluding further industrial development within the affected area. Recent "limits to growth" cases suggest that the necessary flexibility can be incorporated into these innovative air pollution control programs to preclude successful attacks under the equal protection clause. Many nonpolluting land uses would still be allowed.

Either a state or local government can implement an EDZ approach, but neither can proceed if the legal doctrines within the state prohibit it. Thus, it is necessary to consider issues at the state level. The authority of the state to enact various regulations under its police power can be delegated to local governments by specific air pollution control legislation or by general enabling legislation that allows local governments to proceed independently in resolving local environmental quality problems.

This study examines the statutory and regulatory provisions in six representative states to determine if they are compatible with the EDZ technique. These states - Alabama, Colorado, Illinois, Minnesota, New Jersey, and Pennsylvania - represent the gamut of policies related to environmental quality in general and to air pollution control in particular. A review of the diverse approaches adopted by these six states affirms the observation by Justice Louis Brandeis that:

> It is one of the happy incidents of the federal system that a single courageous State may, if its citizens choose, serve as a laboratory; and try novel social and economic experiments without risk to the rest of the country. *New State Ice Co. v. Liebmann*, 285 U.S. 262 at 311 (1934) (dissenting opinion).

Land development and legal controls obviously do not operate in a vacuum, and persons contemplating the usefulness of EDZ must take into consideration the political realities involved. The traditional tensions between private property rights and public regulation of land use are not lessening.

Air pollution control agencies typically must allocate their resources carefully and some may be reluctant to propose an untested and politically sensitive technique. Others, however, may find merit in the innovative EDZ method and thus will act as "laboratories" for the rest of the nation.

1.3 USE OF THE LEGAL ANALYSIS

The legal questions examined in this report provide a framework for model legislation. The federal government or the individual states may wish to pass specific legislation to allow the use of EDZ and other emission quota strategies. An examination of the issues that can arise in the absence of enabling legislation should prove useful in the development of legislative proposals encompassing EDZ and other emission quota strategies.

Therefore, this document is directed to federal, state and local legislators, in addition to air pollution control officials and land use planners who may only consider the technical aspects of EDZ and other emission quota strategies. Although planners and air pollution control officials might be most interested in the technical aspects of EDZ, as set forth in the companion *EDZ Guidebook* cited earlier, the legal issues that arise offer potentials and problems that must be addressed.

For example, likely applications of EDZ might be as a control mechanism for problems involving air quality maintenance, the prevention of significant deterioration (PSD), and attainment (offset) strategies, as set forth in the most recent amendments to the Clean Air Act. This legal analysis can help states decide on the role of EDZ and other emission quota strategies in these aspects of air pollution control and planning.

1.4 FOOTNOTES

1. Brail, R.K., *Land Use Planning Strategies for Air Quality Maintenance*, Proc. Specialty Conf. on Long-Term Maintenance of Clean Air Standards, Lake Michigan States Sec. of Air Pollution Control Assn., Chicago, J.J. Roberts, ed., pp. 275-289 (Feb. 1975).

2. The concept of transferable emission rights, or emission rights for sale, has been discussed in the literature in relation to EDZ. This report does not consider this option.

3. See note 1, *supra*.

4. See note 1, *supra*.

5. See note 1, *supra*.

6. Kron, N.F., Jr., A.S. Cohen, and L.M. Mele, *Emission Density Zoning Guidebook: A Technical Guide to Maintaining Air Quality Standards through Land-Use-Based Emission Limits*, U.S. EPA Report EPA-450/3-78-048 (Sept. 1978).

2 THE CLEAN AIR ACT AND EMISSION QUOTA STRATEGIES

2.1 FEDERAL POLICY AND THE CLEAN AIR ACT

The federal Clean Air Act and its amendments establish a national program for air pollution control in 42 U.S.C. §1857 *et seq.*, as amended by 42 U.S.C. §7401 *et seq.* (1977 Supp.). The Act and its administrative regulations create both a mandate and a framework for state and local pollution control strategies. The mandate stems from Congressional findings that air pollution is a serious problem that can only be dealt with by coordinated efforts among the states to develop and administer programs consistent with the Act. The framework for these programs is based upon the concept of air quality planning by the states, consistent with guidelines contained within the Act and federal regulations governing the preparation, submission, and review of such plans.

States may have a great deal of latitude in implementing air quality plans. Implementation may be by conventional means, i.e., regulating the level of emissions produced by individual sources, or by innovative mechanisms, including various types of land-use controls. Chapter 2 focuses on the second means of implementation, and discusses the latitude states and communities have to consider the use of emission density zoning to regulate air pollution emissions.

The federal mandate contained with the Act and the provisions and structure for administering the Act are discussed in Appendix A. This appendix outlines the Act's major provisions and planning criteria that can influence state decisions to consider EDZ and other emission quota strategies as viable alternatives for achieving federal air quality objectives.

2.2 EMISSION QUOTAS AS LAND-USE STRATEGIES

As enacted in 1970, the Clean Air Act contained a broad mandate for including land-use controls[1] in state implementation plans (SIPs).[2] This commitment to a two-pronged pollution control strategy of technological source controls and land-use controls was somewhat restructured by the 1977 amendments to the Act. Generally, these amendments preclude the U.S. EPA from requiring that land-use controls be included in a SIP, other than those controls the Act specifies. The states are not prohibited from including land-use controls in SIPs in addition to those measures expressly authorized by the Act.

A state's authority to adopt air quality standards, limitations, or controls more stringent than those required is confirmed in §116 of the Act. This section raises the issue of the status of such "voluntary" restrictions under the Act. If a state, pursuant to §116, includes more stringent restrictions such as land-use controls, and the EPA Administrator approves the plan, do these controls become part of the state's implementation plan? If so, are these controls enforceable by the Administrator? Must the Administrator approve the plan even if he or she disagrees with the decision to include the controls? The answer to each of these questions is "yes."[3]

Despite this change in the statute, land-use regulations remain an important tool in air pollution control.[4] Many observers have claimed that a successful pollution control effort must include land-use regulation.[5] Just as land development and urbanization patterns will either support or detract from the pollution control effort, so pollution control programs will influence these patterns of land use.[6]

The remaining portion of this chapter describes how land-use controls may be used under the Clean Air Act, either expressly or by implication. Within these limitations, the manner in which emission quotas might be adopted and administered will be evaluated.

The threshold question to consider is whether the Clean Air Act contains any provisions that would absolutely bar a state from employing EDZ or other types of emission quota strategies as air pollution control measures. The answer to this question is that the Act does not prohibit the use of emission quotas as part of a state's strategy to achieve the National Ambient Air Quality Standards (NAAQSs). It is true, of course, that the EPA is no longer authorized to require land-use controls as part of a SIP. A SIP must contain, in addition to "emission limitations, schedules, and timetables for compliance with such limitations," such "other measures...necessary to insure attainment...of the [NAAQS]...not limited to transportation controls, air quality maintenance plans, and preconstruction review of direct sources of air pollution...."[7] The legislative history to the 1977 amendments indicates that those controls listed in the quoted provision are intended to be the only form of land-use control, authorized by the statute, that the EPA may require in a SIP.[8] Apparently the intention is to exclude zoning and other forms of land-use controls that affect air quality through the regulation of land-use activities.

It is difficult to know whether emission quotas should or should not be classified as a land-use control for purposes of determining their acceptability under the Clean Air Act. The emission quota is applied to land areas and has the effect of allowing or disallowing a use of land, but the criteria used in administering the quota are related to attainment and maintenance of the NAAQSs. In addition, the quota is applied on a source-by-source basis and is similar in operation to the preconstruction review and permit procedures that, for the first time, have been expressly authorized by the 1977 amendments to the Clean Air Act. These procedures provide direct authority for the inclusion of an emission quota in a SIP.

Another section in the Clean Air Act appears to authorize voluntary state adoption of an emission quota as part of its SIP. That section[9] authorizes the states to adopt any air pollution control measures provided they are not less stringent than standards or limitations imposed under the Act. An emission quota intended to achieve compliance with the NAAQSs would seem to fall within this provision.

Even though emission quotas may be included in a SIP, the more difficult question is whether, if this method is used, it can be implemented to conform to the Act's very detailed and specific requirements for each of the three types of air quality areas distinguished by the Act. These areas are the nonattainment areas, the air quality maintenance areas (AQMAs), and prevention of significant deterioration (PSD) areas. The nonattainment areas appear to present the most difficulty for emission quotas.

2.2.1 Air Quality Maintenance Areas (AQMAs) and Prevention of Significant Deterioration (PSD) Areas

The measures required for maintenance of air quality, unlike the detailed provisions for the nonattainment and PSD areas, have been largely left to the states. The 1977 amendments to the Clean Air Act explicitly authorize "such measures as may be necessary to insure...maintenance...[of the NAAQSs]."[10] The EPA had previously issued regulations requiring plans for air quality maintenance areas, and these regulations include procedures for air quality analysis and air quality maintenance plans.[11]

The EPA has stated that it does not intend, through these regulations, to impose federal land-use controls.[12] It is not clear whether emission quotas should be considered land-use controls. But, assuming that emission quotas are classified as land-use controls, the inference is that EPA will not require emission quotas as necessary elements in air quality maintenance plans. However, states appear free to include emission quotas under the section of the statute authorizing supplementary state controls.

EPA regulations require the SIP to identify those areas of the state "which, due to current air quality and/or projected growth rate, may have the potential for exceeding any [NAAQS]" within a ten-year period following submittal of the maintenance plan.[13] For each AQMA, the state must perform an air quality analysis and, if necessary, submit an air quality maintenance plan (AQMP).[14]

The procedures for the AQMA analysis require that emissions be projected for each pollutant for a period of 20 years, unless modified by the EPA Administrator to a ten-year period.[15] The projected emissions are then to be allocated to sub-county areas.[16] These projections must also be made for air quality.[17]

Based on the submitted air quality and emission projections, the EPA Administrator will determine which areas require an AQMA plan.[18] It is then up to the state to develop a control strategy to maintain air quality. The state must submit an air quality maintenance plan that describes each control measure, but the regulations do not require any particular measures.[19] However, the measures must be legally enforceable and include certain consultation procedures.[20] Guidelines published by the EPA in 1974 had suggested various emission quota controls as a means of implementing air quality maintenance plans.[21]

An emission quota strategy can be particularly useful in a maintenance program. Once the required analysis has been accomplished, and the future pattern of emissions and air quality projected, an emission quota can be imposed that will maintain pollution levels at or below those specified by the appropriate air quality standard.

The land-use implications of a PSD strategy attracted considerable attention when Congress enacted the 1977 Clean Air Act amendments.[22]

Congress explicitly specified the prevention of significant deterioration as a requirement to be included in state implementation plans,[23] and there is explicit authority in the statute requiring PSD controls in the state SIP whenever there are areas in the state that are subject to the PSD strategy.

As noted earlier, the PSD requirements in the statute are implemented by automatically assigning all areas in each state to one of three classes. The state may reclassify these areas at its option. For each area the Act sets maximum allowable increases in particulate matter and sulfur dioxide levels relative to the baseline pollutant concentrations in the PSD area.[24] In no event may the NAAQSs be violated in any of these areas.[25] Since additional pollution allowable in PSD areas is stated in terms of ambient air quality, an emission quota implemented in a PSD area must ensure that the allowable incremental changes in air quality will not be violated. The methodology presented in the *EDZ Guidebook* develops emission quotas based on acceptable air quality.

The use of emission quotas received attention from the EPA in 1973 when it proposed a PSD requirement. At that time an emission quota variant was proposed as one of four alternative ways to help define significant deterioration,[26] but was rejected because of technical and other difficulties. In view of this history, it might be argued that the EPA's adoption of the air quality increment approach to PSD, as later codified by Congress, was an implied rejection of the use of an emission quota to implement the PSD requirement. There is no legislative history shedding any light on this problem, however, and the express authority reserved to the states to adopt "any standard or limitation respecting emissions of air pollution"[27] that is at least as stringent as a standard or limitation contained in an SIP should provide sufficient authority to adopt an emission quota as a means of implementing the PSD requirement.

Two components of the PSD requirement must be considered when evaluating the use of an emission quota other than EDZ in this context -- the requirements applicable to the area classification system and available pollution increments, and those applicable to the preconstruction review of new sources within PSD areas. The first type of requirement was described earlier. These pollution increments differ, and the greatest increment is allowed for the Class III PSD areas.

An emission quota for any PSD area may be derived from the allowable pollution increment for that area. This increment, which is an air quality measure of the concentration of a given pollutant allowable in the ambient air, must be requantified as a loading requirement under the emission quota. In no event may the emission quota be set so that the NAAQSs are violated. Once the allowable pollution increment is converted into an emission quota, the PSD requirement may be implemented directly through application of the quota.

Problems may arise in the use of the emission quota to implement the PSD requirement when a state reclassifies a PSD area. At the time of reclassification, the quota may have to be reexamined and possibly changed. It is difficult to know in advance what changes may need to be made in the emission quota for several reasons. First, baseline concentrations of pollutants will not be the same for each area with the same classification. Reclassification may result in appreciable or negligible changes in the quota, depending upon how much of the allowable increment for the new classification remains available. Second, continual reductions in emissions through the application of improved technology could increase the available increment. Third, it is impossible to know in advance just how an area will be reclassified because reclassification need not be based on current air quality levels or land-use patterns. The classification may reflect the desired degree of change from current levels and patterns.[28]

Like the nonattainment area plan provisions, PSD also requires the preconstruction review of major new sources within PSD areas. A seemingly attractive option is to coordinate an emission quota strategy with the preconstruction review process. However, if this coordination occurs, care must be taken to ensure that either the quota applies to only those sources requiring preconstruction review under PSD requirements or that all sources subject to the quota are included in the preconstruction review process. If this precaution is not taken, then after the quota has been exhausted (a situation that cannot occur with EDZ), no new sources subject to preconstruction review will be allowed to locate in the PSD area.[29] However, sources not subject to preconstruction review, but subject to the quota, may be constructed because a mechanism to enforce the quota may not be established for these sources. Alternatively, sources not subject to preconstruction review may use up all of the quota, to the detriment of those requiring the review. These situations may raise issues of equal protection and due process. Therefore, if the preconstruction review process is coordinated with an emission quota strategy, care must be taken to avoid these potential legal problems.

Other requirements applicable to the preconstruction review of new sources of pollution in PSD areas are also supplementary to the use of the emission quota and must be considered when the emission quota is applied. These include a requirement that the proposed source be subject to the best available control technology[30] and a requirement that "any air quality impacts projected for the area as a result of growth associated" with the new source be analyzed.[31] While the air quality analysis must be provided, it does not appear to impose any substantive control on the decision to allow a new stationary source, except to the extent that it would influence the determination of best available control technology.

This discussion indicates that emission quotas may be useful in the administration of the statutory PSD requirement. If the emission quotas must be revised when PSD areas are reclassified, the expense and time required to do so may also limit the effectiveness of emission quotas as PSD control measures.

2.2.2 Nonattainment Areas

There are two components to the nonattainment area provisions of the Act: the plan itself and the preconstruction review and permit procedure required for new major stationary sources of pollution seeking to locate in nonattainment areas.[32] The NAAQSs must generally be attained in these areas by 1982, but the Act also provides that the plan in the interim must require "reasonable further progress" toward this goal.[33] This phrase is in turn defined as "annual incremental reductions" in air pollution sufficient to attain the NAAQSs by the statutory date.[34]

In addition to the "reasonable further progress" requirement of the nonattainment plan, the Clean Air Act also requires a preconstruction review procedure and permit for any new "major" stationary source of pollution if its emissions will cause, or contribute to, concentrations of a pollutant for which the NAAQS is violated in the nonattainment area.[35] This permit may be issued subject to compliance with one of two alternative standards. Under the first, the emission offset standard, the permit may be issued if emissions from the new major source, existing sources, and stationary sources that are not major sources will be sufficiently less than emissions prior to approval of the new source so that reasonable further progress toward attainment of the NAAQS will be achieved.[36] This provision will generally require a reduction in emissions from existing stationary sources so that additional pollution from a new major source can be allowed. Since both the emission offset standard and the emission quota assume compliance with the NAAQS, it should be possible to use the emission quota to determine whether compliance with the emission offset requirement can be achieved. Note, however, that in applying the emission offset policy, pollution from new sources that are not major sources also must be considered. To make the emission quota functional as a method of determining compliance with the emission offset standard, it will thus be necessary to include existing and projected emissions from all stationary sources in calculating the emission quota. If the *EDZ Guidebook* has been used, these projections will have been made.

Permits may also be approved under an alternative standard for new major stationary sources emitting pollutants for which the NAAQSs are violated. Under this standard, the permit may be issued if emissions from the new major source will not exceed the emissions allowance provided in the nonattainment plan.[37] A provision in the Act applying to the nonattainment plan requires in turn that the emissions to be allowed from new major stationary sources of pollution must be identified and quantified.[38] It is this identified incremental allowance of emissions that must not be exceeded when a permit is approved under this second standard. While the Act does not expressly so provide, it seems clear that the growth increment to be identified in the plan for emissions must not permit an increase in pollution levels that will prevent attainment of the NAAQSs by the statutory date.

It is possible to use the emission quota to implement this permit standard if the growth increment for emissions identified in the nonattainment plan is considered and taken into account when the emission quota is set. If the *EDZ Guidebook* is used, the emission quota will take projected growth into account. This growth will have to be calculated for the attainment plan period so that the allowable emission increment can be made consistent with attainment of the NAAQSs by the statutory date. The emission quota may be used to identify the allowable emission increment if the pollutant load measure used to set the emission quota may also be used to specify the allowable emission increment in the nonattainment plan. No provision appears to suggest that this emission measure may not be used.

While the emission quota may thus be adapted to determine compliance with either of the standards under which permits for new sources may be issued in nonattainment areas, there are three other requirements for new source permits in nonattainment areas that cannot be implemented by using an emission quota. These requirements could be regarded as supplementary to the emission quota. The first calls for a cost-benefit review of new major stationary sources of pollution in areas which do not meet the NAAQS for photochemical oxidants or carbon monoxide. In these areas an air quality analysis must be performed for each new major stationary source, and the source may not be approved unless its benefits outweigh its environmental and social cost.[39] This cost-benefit analysis does not apply to emission quota strategies considered in this document because they deal only with sulfur dioxide and particulate matter.

The second requirement calls for emissions from new major stationary sources to be at the lowest achievable rate,[40] which appears to call for the use of pollution control technology possibly more stringent than that required by a new source performance standard.[41] This requirement does not affect an emission quota since the quota is an additional constraint on air emissions. If the lowest achievable emission rate requirement means that emissions from a new source will be reduced to a level that would not have been achieved under a new source performance standard, the emissions from that source will also be correspondingly reduced and an extra margin for growth provided under the emission quota. The determination of the lowest achievable emission rate will have to be made independently of the application of the emission quota.

The third requirement for the issuance of a new stationary source permit is that the source owner or operator applying for a permit must show that other sources he or she owns or operates are in compliance with any applicable emission limitations or standards imposed under the Clean Air Act.[42] Compliance with other statutory emission limitations or standards might be shown through compliance with an emission quota if one is applicable, but this compliance requirement must also be viewed as supplementary[43] to any demonstration by the proposed source's operator that he or she has complied with the applicable emission quota.

This review of the Clean Air Act provisions for nonattainment areas indicates that the emission quota must be carefully designed and administered to accommodate a coordinated approach to satisfy the requirements contained in the Act for nonattainment areas. Problems may especially arise because the preconstruction review process required by the Act is only required for major sources, even though emissions from nonmajor stationary sources may have to be considered when a preconstruction permit is approved. The quota will have to account for emissions from all stationary sources, even if approval under the quota is limited to major sources.

2.3 EMISSION QUOTAS AS AIR POLLUTION DISPERSION TECHNIQUES

The previous discussion of emission quota strategies focused on emission quotas as air pollution abatement strategies. However, these same techniques may also be studied as possible pollution dispersion strategies.

The air pollution control techniques collectively known as emission quota regulations share a common attribute: all would reduce the concentrations of air pollutants by horizontally dispersing the stationary sources. That is, these land-use techniques are not designed to reduce the total amount of pollution but to distribute it in such a manner that the local ambient concentrations remain relatively low.

Two other strategies with similar purpose have been considered in the past, but are no longer applicable: construction of tall smokestacks that disperse pollutants over a large geographic area, and installation of supplemental control systems that monitor ambient air quality and temporarily decrease or stop the emissions during periods of high ambient concentrations.

Historically, in issuing guidelines for implementation of the Clean Air Act,[44] the EPA Administrator initially approved the use of tall stacks and supplemental controls in state implementation plans.[45] This determination was based on the finding that the operative provisions of the Act allowed considerable flexibility in determining which alternatives would be applicable to stationary sources. Section 110(a)(2)(B) of the 1970 amendments to the Clean Air Act provides that the Administrator shall approve a state implementation plan if, among other requirements,

> [It] includes emission limitations, schedules, and timetables for compliance with such limitations, and such other measures as may be necessary to insure attainment and maintenance of such primary or secondary standard, including, but not limited to, land-use and transportation controls.[46]

Issue has been taken with this determination for several reasons, but primarily because these techniques "run directly counter to the thrust of the 1970 amendments."[47] The Clean Air Act amendments of 1970 provide for emission limitations that are to be enforced without regard to pollutant concentrations in the ambient air.

The U.S. Court of Appeals for the Fifth Circuit held in 1974 that the Administrator violated the 1970 amendments by approving the Georgia SIP, because, among other reasons, it relied upon dispersion of pollutants rather than emission reduction and thus was not in keeping with the "nondegradation" policy of the Act.[48]

> The use of dispersion techniques is at odds with the nondegradation policy. Dispersion enhancement techniques operate by keeping pollutants out of areas of high pollutant concentration, and dispersing them to lower concentration areas; their objective is to reduce concentrations in high-concentration areas. Inevitably, however, the pollutants emitted into the atmosphere must end up somewhere; and the atmosphere at their destination, wherever that may be, will be degraded, in violation of the congressional policy. The only techniques fully capable of guaranteeing nondegradation are emission limitation techniques.[49]

The tall stack issue was not involved on appeal to the Supreme Court, but language in the Court's opinion makes it clear that dispersion techniques may not be substituted for emission limitations, although they may be used in conjunction with them.[50]

Subsequently, the Sixth Circuit[51] Court ruled that intermittent (supplemental) controls alone did not satisfy the requirements of the Act, and the Ninth Circuit Court agreed:

> Intermittent control systems (such as those restricting production, or utilizing less polluting fuels, during periods of adverse weather) do limit the amount of pollutant emitted while such controls are being applied. However, the reliability and enforceability of such controls is questionable; they may not be implemented when they are in fact needed. Moreover, there is no assurance that temporary reductions and emissions resulting from such controls will not be balanced, or even exceeded, by an increase in the amount of pollutant emitted when weather conditions improve and production is

> increased to make up for prior losses, or more polluting fuels are again used. Thus, intermittent controls, like tall stacks, may only disperse the pollutant rather than reduce it. Tall smokestacks disperse a pollutant through greater quantities of air; intermittent control systems disperse pollutant peaks through longer periods of time. Neither assures a reduction in the quantity of the pollutant eventually emitted.[52]

Proponents of "emission density quota" regulations cannot be encouraged by judicial rejection of other dispersion techniques.[53] The similarities in purpose and effect suggest that the proposed allocation method is open to attack on statutory as well as constitutional grounds. This is not to say, however, that the method cannot be used, but that its use alone probably would fail to comply with national policy as declared by the Congress and interpreted by the courts.

2.4 FOOTNOTES

1. The health-related objectives of the Clean Air Act 42 U.S.C. §7401 *et seq.* (1977 Supp.) and the statutory requirements provided a valid legal basis for the imposition of land use controls. See D. Mandelker, Environmental and Land Controls Legislation 17 (1976). In discussing the 1970 version of the Act, one commentator distinguished the goals of attainment and maintenance of the NAAQSs (which were "necessary to protect the public health and welfare") from the PSD policy (originally implied, but not fully articulated in the Act). See Note, Federal Land Use Controls for Clean Air, 3 Env. Aff. 507 (1974). Congress, in response to Sierra Club v. Ruckelshaus, 344 F. Supp. 253 (D.D.C. 1972), aff'd per curiam, 4 E.R.C. 1815 (D.C. Cir. 1972), aff'd by an equally divided court, sub nom., Fri v. Sierra Club, 412 U.S. 541 (1973), addressed the matter in the 1977 Amendments. See Title I, Part C, §§160 *et seq.*

2. §110(a)(2)(B) 42 U.S.C. §7410 originally provided that the SIP must include "emission limitations.... and such other measures as may be necessary to insure attainment and maintenance of [the NAAQSs], including, but not limited to, land-use and transportation controls...." Congress failed to specify or suggest what types of land-use controls would be appropriate. But see South Terminal Corp. v. E.P.A., 504 F.2d 646 (1st Cir. 1974) (transportation controls authorized as a land-use control).

3. Union Electric Co. v. E.P.A., 427 U.S. 246 (1976). Bleicher, Economic and Technical Feasibility in Clean Air Act Enforcement Against Stationary Sources, 89 Harv. L. Rev. 316, 320-322 (1975).

4. Studies of air quality control long have recognized that land-use planning and land-use controls are necessary to achieve and maintain clean air. Mandelker & Rothschild, The Role of Land-Use Controls in Combatting Air Pollution Under the Clean Air Act of 1970, 3 Ecology L.Q. 235 (1973).

5. Mandelker & Rothschild, *supra* note 4 at 235, citing R. Thuillier, A Regional Air Pollution Modeling System for Practical Application of Land-Use Planning Studies 1 (May 17, 1973).

6. *Id. See also* 4 Ecology L.Q. 781 (1975).

7. §110(a)(2)(B). 42 U.S.C. §7410.

8. H. Rep. No. 564, 95th Cong., 1st Sess. 127 (1977).

9. §116. 42 U.S.C. §7416.

10. §110(a)(2)(B). 42 U.S.C. §7410.

11. The EPA Administrator has promulgated regulations for air quality maintenance planning areas identified pursuant to 40 C.F.R. 51.12 (1977). These regulations "leave entirely in the hands of the states the choice of measures that are needed to maintain the [NAAQS]." 40 Fed. Reg. 49048 (1975).

12. *See* 40 Fed. Reg. 18382 (1976).

13. 40 C.F.R. §51.12(e).

14. 40 C.F.R. §51.12(g).

15. 40 C.F.R. §§51.42, 51.44. The regulations refer to techniques to be followed in making the projections but allow alternatives as approved by the Administrator.

16. 40 C.F.R. §51.45(a).

17. 40 C.F.R. §51.46(a).

18. 40 C.F.R. §51.52(a)(1).

19. 40 C.F.R. §51.54.

20. 40 C.F.R. §§51.55, 51.58(b).

21. U.S. Environmental Protection Agency, Guidelines for Air Quality Maintenance Planning and Analysis, Vol. 3: Control Strategies Ch. II (1974).

22. *E.g.*, H.R. Rep. No. 294, 95th Cong., 1st Sess. (1977); S. Rep. No. 252, 95th Cong., 1st Sess. (1977); and H.R. Rep. No. 564, 95th Cong., 1st Sess. (1977). See also 38 Fed. Reg. 18986, 18988, 18993 (1973); 39 Fed. Reg. 31000, 31001 (1974).

23. §110(a)(2)(B) contained the statutory authority for the inclusion of land use controls in a SIP for attainment and maintenance of the NAAQSs. This language, upon close analysis, does not appear to refer to controls to prevent significant deterioration of areas cleaner than required by the NAAQSs. The Senate version of this provision would have authorized land-use controls specifically to maintain or "prevent further deterioration

from, any primary [NAAQS]." S. Rep. *supra* note 22 at 144. This language, again read closely, does not appear to authorize land-use controls to prevent significant deterioration of air better than the NAAQSs require. Yet, the Conference Report indicates that the Senate concurred in the House provision with the understanding that land-use controls were permitted to prevent significant deterioration of air quality. H.R. Rep. No. 564, *supra* note 22.

24. §§162, 163. 42 U.S.C. §7472.

25. §163(b)(4). 42 U.S.C. §7473.

26. 38 Fed. Reg. 18986 (1973).

27. §116. 42 U.S.C. §7416.

28. 39 Fed. Reg. 42510, 42512 (1974).

29. §165(a)(3)(A). 42 U.S.C. §7475.

30. §165(a)(4). 42 U.S.C. §7475.

31. §165(a)(6). 42 U.S.C. §7475.

32. The preconstruction review and permit procedure must be included in the SIP, §110(a)(2)(D).

33. §172(b)(3). 42 U.S.C. §7502.

34. §171(1). 42 U.S.C. §7501.

35. §172. 42 U.S.C. §7502; §110(a)(2)(I). 42 U.S.C. §7410.

36. §173(1)(A). 42 U.S.C. §7503.

37. §173(1)(B). 42 U.S.C. §7503.

38. §172(b)(5). 42 U.S.C. §7502.

39. §172(b)(11). 42 U.S.C. §7502.

40. §173(2). 42 U.S.C. §7503.

41. §171(3). 42 U.S.C. §7501.

42. §173(3). 42 U.S.C. §7503.

43. §126 42 U.S.C. §7426 contains a supplemental measure, not incorporated in the permit requirements. Even when a permit has been granted to a source subject to the PSD requirements, it is a violation for that source to be constructed or to operate if such source will adversely affect the attainment, maintenance or PSD measures of another state.

44. 42 U.S.C. §§1857 *et seq.* (1970 as amended in 1977).

45. Changes in these regulations over time can be followed in 40 C.F.R. §§50, 51, and 60 (revised annually).

46. The Clean Air Act Amendments of 1977 delete the reference to land-use controls in 42 U.S.C. §7410(a)(2)(B).

47. Jorling, *The Federal Law of Air Pollution Control,* in Federal Environmental Law 1058 at 1093 (E. Dolgin & T. Cuilbert, eds., 1974). The other arguments are outlined at 1093-1094. For an extended analysis, see Ayres, *Enforcement of Air Pollution Controls on Stationary Sources under the Clean Air Amendments of 1970,* 3 Ecol. L.Q. 441 at 449-460 (1975).

48. Nondegradation was not specifically addressed in the Act, but the evidence is clear that this is a congressional goal. See Sierra Club v. Ruckelshaus, 344 Fed. Supp. 253 (1972), *aff'd sub nom.* Fri v. Sierra Club, 412 U.S. 541 (1973).

49. Natural Resources Defense Council v. Environmental Protection Agency, 489 F.2d 390 at 408-409 (1974), *rev'd in part on other grounds sub nom.* Train v. Natural Resources Defense Council, 421 U.S. 60 (1975).

50. "[S]o long as the ultimate effect of a State's choice of emission limitations is compliance with the national standards for ambient air, the State is at liberty to adopt whatever mix of emission limitations it deems best suited to its particular situation." Train v. Natural Resources Defense Council, 421 U.S. 60 at 79 (1975).

51. Big Rivers Electric Corp. v. Environmental Protection Agency, 523 F.2d 16 (6th Cir. 1975).

52. Kennecott Copper Corp. v. Train, 526 F.2d 1149 at 1155 (9th Cir. 1975), *cert. denied,* 425 U.S. 935 (1976).

53. The Environmental Protection Agency gives "credit" for tall stacks only if planned or constructed prior to the 1974 opinion of the Fifth Circuit, note 6 *supra.* Natural Resources Defense Council v. Environmental Protection Agency, 529 F.2d 755 (5th Cir. 1976).

3 THE CONSTITUTION AND EMISSION QUOTA STRATEGIES

3.1 INTRODUCTION

Emission quotas may be thought of as land use regulations exercised under the police power that do not require that compensation be paid to affected industrial developers. While emission quotas can be constitutionally supported under well-accepted doctrine that approves any government regulation designed to achieve cleaner air and better health, emission quotas may create legal problems because of the restrictions they impose on land development. These restrictions present constitutional problems that may distinguish emission quotas from conventional land use zoning.

In conventional zoning and emission density zoning, land uses and densities are allocated under uniform and consistent zoning criteria. Overly restrictive zoning regulations may present constitutional objections if land development is excessively constrained, but zoning ordinances do not impose quota restrictions that prohibit all development once a quota has been exhausted. The possibility for quota exhaustion under non-EDZ air emission quotas thus raises constitutional questions not associated with conventional zoning regulations. Objections that a developer's land has been unconstitutionally taken without compensation through application of a non-EDZ emission quota may be raised in situations in which development has been denied under the quota and no other reasonable use of the land is available. Fairness objections under the equal protection clause of federal and state constitutions may be raised to the method in which emissions are assigned to would-be developers under an emission quota. It can usually be expected that emissions will be assigned on a first-come basis, although it may be important in some instances to deny approval to first-come developers if they will use too high a proportion of the emission quota. Whether this time-oriented basis for allocating emissions among developers is supportable as a reasonable classification under the fairness requirement of the protection clause raises another set of constitutional problems.

Equal protection objections arising from the method by which the non-EDZ emission quota is allocated do not arise under emission density zoning, because ownership of land itself carries with it a quota. Due process objectives may arise under EDZ if the amount of land the developer is required to assemble is disproportionate to the intended use of the land. This excessive land assembly requirement may be held to be confiscatory and an unconstitutional taking of property.

3.2 DUE PROCESS

There are two branches to a due process rationale for emission quotas. It is first necessary to find a supportable public purpose or rationale for the adoption and administration of the quota.[1] Since emission quotas implement important and valued air quality goals, it should not be difficult to satisfy this part of the due process test.

The second and more exacting standard requires that public regulations not be confiscatory.[2] Public power over private property ranges from regulation or prohibition of land use under what is known as the police power to a taking of all or a part of the land under the power of eminent domain.[3] Ordinarily, prohibiting or regulating the private use of land is considered a valid exercise of the police power[4] and may be carried out without compensation. The physical appropriation of private property for public use through the exercise of the eminent domain power[5] is deemed a taking and requires payment of just compensation.[6] In an intermediate situation, land use regulation may impose so onerous a burden on the regulated property that the landowner is deprived of all reasonable use of the land.[7] A restriction of this type does not usually require compensation. Nevertheless, the property owner is deprived of the beneficial use of his or her property without due process of law and the regulation is held invalid.[8]

3.2.1 Confiscation of Property

There are no consistent judicial theories that determine the point at which a regulation becomes tantamount to a taking and must be invalidated. The discussion that follows therefore reviews several theories that can be applied to the taking problem in the context of emission quotas. While no definitive conclusions can be drawn, it is apparent that recent trends in judicial doctrine have created a favorable climate for the adoption and implementation of emission quota strategies.

Throughout the cases there exists a tension between two conflicting views of the taking issue as it arises in land-use regulation. Under one view, no taking occurs unless there is a full confiscation of the landowner's right to the use of land.[9] A competing judicial doctrine finds a taking when the use value of the land has been diminished and there is no supporting countervailing public interest.[10] This diminution-of-value approach focuses on a balancing of the community interest in land regulation against the reduced value of property due to curtained use.[11] The application of this approach to the taking problem reflects judicial respect for landowners' right to develop their land against the public's right to limit that landowners' right to further acceptable public purposes.[12]

In the early 1900s, courts were unsympathetic to diminution-in-value claims. Drastic regulations that curtailed use value were sustained when their objective was to eliminate harmful or noxious uses.[13] Beginning with the landmark *Euclid*[14] case, which sustained the exercise of the zoning power, the courts implicitly accepted the idea that total deprivation of all use was not necessary to constitute a taking.[15] Although the Court in *Euclid* did not specify when a diminution in value would lead to invalidation, courts following the *Euclid* approach could and did invalidate regulations when the loss imposed on the property owner was significant but not wholly confiscatory.[16]

Recent cases in some jurisdictions may have returned to the more stringent confiscation test. While not rejecting outright the diminution-in value approach, these cases have held that regulation is constitutional if reasonable alternative uses remain to the landowner. They have redefined the term "reasonable remaining use" to include relatively unintensive uses not necessarily viable in an economic sense. This new test validates land-use restrictions as long as a use of any kind remains. Departing from the original formulation of the diminution-in-value test, this new approach takes a different perspective of "reasonable remaining use,"[17] and accepts more burdensome restrictions on the landowner as consistent with the due process taking requirement.

These cases do not always arise in regulatory settings in which there is a compelling public interest, as in cases in which a land use regulation preserves environmental values entitled to high social priority. Many have considered restrictions on industrial and commercial uses similar to those likely to arise under emission quotas. For example, in *McGowan v. Cohalan*,[18] the highest New York court considered the constitutionality of a downzoning from industrial to residential use. Despite the drastic effect this downzoning had on the economic value of the plaintiff's land, the court held it constitutional. Assured that the "market would provide a buyer,"[19] the court required the plaintiff to show that the new zoning classification would provide "absolutely no reasonable return."[20]

In another case decided by the highest New York court, *National Merritt, Inc. v. Weist,*[21] a property owner sought an area variance allowing development of a shopping center greatly exceeding size limitations allowable for retail stores in general business zones. The property owner contended that the topography of the land created a severe hardship that limited the development of the property for shopping center purposes. The owner maintained that compliance with the zoning restrictions would not permit construction of a shopping center yielding a reasonable return on the land.[22] The court distinguished the constitutional challenge to the ordinance based on significant economic injury from the financial hardship required for an area variance. In a constitutional challenge, the owner must "demonstrate beyond a reasonable doubt . . . that each and every use permitted by the ordinance will fail to yield a reasonable return on the property."[23]

These two recent New York cases indicate that the courts may have decided to elevate the burden of proof required from landowners who attempt to show that a land-use regulation as applied to their land is unconstitutional. While not entirely rejecting the diminution-in-value rationale, they do require greater rpoof of economic loss. In addition, the courts are providing a basis for sustaining potentially confiscatory land-use regulations except in the most extreme circumstances.[24]

The highest New York court has extended its confiscation rationale in a case considering a local timing control ordinance imposing restrictions similar to those that might be imposed under an emission quota. In *Golden v. Planning Bd.*[25] a local ordinance conditioned residential development on the availability of adequate municipal services and facilities. These services and facilities would become available under a local capital improvements program through which land development could be deferred for as long as 18 years.[26] The argument that the ordinance amounted to a taking of property was considered and rejected:

> Every restriction on the use of property entails hardships for some individual owners. These difficulties are invariably the product of police regulation and the pecuniary profits of the individual must in the long run be subordinated to the needs of the community.... The fact that the ordinance limits the use of, and may depreciate the value of, the property will not render it unconstitutional, however, unless it can be shown that the measure is either unreasonable in terms of necessity or the diminution in value is such as to be tantamount to a confiscation....[27]

An equally relaxed view of the taking problem was adopted by a federal Court of Appeals in a case that considered the constitutionality of an air quality transportation control plan adopted for the Boston air quality control region. In *South Terminal, Inc. v. EPA*[28] one of the controls adopted in that plan, now precluded by the Clean Air Act, was a prohibition on the construction of additional on-site parking facilities. As applied to the Boston International Airport, the transportation control plan terminated about 1100 planned parking spaces, requiring these spaces to stand idle and thus, in effect, confiscating the revenues they would have produced.[29] The court refused to find a taking and placed heavy emphasis on the role of the plan in achieving air quality standards. Paying due deference to Congressional purpose, the court recognized that Congress intended to force compliance with air quality standards "even if the costs were great," adding that "[m]inimum public health requirements are often, perhaps usually, set without consideration of other economic impact."[30] While this decision reflects the more relaxed view of the federal courts toward the taking problem as compared with the often more stringent view of the state courts, it emphasizes that air quality objectives may support burdensome land-use control restrictions.

While reiterating the rule that a taking has not occurred as long as some reasonable use is allowed on the property, the court did note that "[t]he takings caluse is ordinarily not offended by regulation of uses, even though the regulation may severely or even drastically affect the value of the land or real property."[31]

Equally of interest are the suggestions offered by the court for minimizing the loss. In this case the effect of the restriction was to freeze part of the parking operator's land from parking use. The court suggested that the parking spaces that had been eliminated could be sold to other parking operators, leaving the seller free to use land under his restricted lot for other purposes. The court also noted that the parking restriction had the effect of creating a parking cartel, so that any loss in revenue from the parking prohibition could be compensated by an increase in prices on remaining parking spaces. This analysis assumes that the demand for parking is relatively inelastic, but the court, nevertheless, accepted this speculative possibility as one basis for rejecting the taking argument.[32]

The price situation considered in *South Terminal* may not arise in the emission quota context. Unlike the partial prohibition considered in *South Terminal*, an emission quota could totally prohibit development of the restricted land, although this is unlikely. In that event, the opportunity for recoupment by the restricted landowner will not be present, although arrangements for transfering air emission rights may moderate the taking objection. Nevertheless, by suggesting that alternative uses consistent with the prohibition may avoid a taking objection, the *South Terminal* court underlines the necessity for a total prohibition on land use before a taking will be found.

3.2.2 Defending Land-Use Regulations

Another line of cases indicates that land-use regulations that are totally confiscatory of property values may nevertheless be held constitutional because they serve some paramount collective interest.[33] Examples include regulations requiring the preservation of vulnerable environmental areas, such as wetlands or isolated historic buildings. An isolated historic building may be preserved for the benefit of the entire community even though it does not bring a reasonable return to its owner. A wetlands area may be preserved and all economically viable uses prohibited in order that the entire community may enjoy its amenities and ecological values. In each case the regulation may be totally confiscatory yet justified by a collective public purpose.[34]

There is a counterargument in these situations which suggests that a taking should be found. An element of current taking doctrine is the recognition that public restrictions on the use of land confer a net benefit on society. Notions of fairness require that this burden should be shared among those benefited.[35] The historic preservation and wetlands cases are in this category. Emission quotas may also fit this characterization. As administered, emission quotas may concentrate a confiscatory economic loss on a single landowner so that the benefits of improved air quality can be enjoyed by a larger, diffused public.[36]

A recognition of a superior public right may legitimate the imposition of this cost upon the landowner through an application of the avoidance of harm doctrine.[37] It has been accepted since the *Euclid*[38] case that avoidance of harm is an appropriate basis for police power regulation when that harm is visited by one landowner on another.[39] An example is the location of an industrial use in a residential area. The industrial use imposes external costs on residential landowners, and the market provides no incentive for the owner to internalize the cost by relocating. Land-use regulations are adopted to prevent the imposition of this external cost and compensation is not required.[40] Recent cases recognize that resources such as wetlands and clean air are public goods that are entitled to police power protection.[41] Uses which injure the natural state of these environmental goods and diminish the public's right to enjoy them can be prohibited by applying the avoidance of harm doctrine.[42] Since profit motivates the private landowner to convert the public good to personal use, either by developing the wetlands area or constructing a new industry that pollutes the air, the public entity must intervene to prevent this conversion. The market does not discipline the landowner to preserve the public good any more than it disciplines the landowner to avoid a use which imposes an external cost on a neighbor.

Under this theory, a land-use restriction that prevents conversion of a public good to private use avoids a harm to the public and is sustainable on that ground. The regulation is not viewed as conferring a benefit on a larger public at the expense of a single landowner but as vindicating the public right to preservation of a public good.[43] This result follows even though the restriction is approximate to a confiscation of the private owner's land. This novel concept views the collective rights of the public as equal in stature to those of a private landowner.[44] Inasmuch as a public good may be valuable to the entire public but not to the individual landowner, the analysis conceded that it might not be optimal to the landowner to preserve that public good.[45] In this instance, preservation through public regulation is warranted.[46] The taking problem is avoided because the police power legitimizes the preservation cost to the landower. Another explanation of the public good doctrine is that preserving a public good not only benefits the general public but also the property owner, as a member of the general public.[47] This reciprocity of advantage compensates the landowner for any loss in the development value of the land, and eliminates the taking claim.[48]

There is yet another rationale that supports noncompensatory regulation of land when there is total restriction of developmental use. This theory, which also imparts equal weight to the collective rights of a diffuse public, conceptualizes property rights as an interdependent network of competing uses.[49] It places the demand made by a private owner to develop a commonly enjoyed resource on the same level as the right of the public to maintain that resource in its existing state.[50] This rationale perceives certain land resources as a "common," within which development by one landowner burdens other interrelated lands that owners choose to preserve in a natural state. Each use has a spillover effect. Since each use reacts negatively on the other, neither is entitled to preference.[51]

Under this rationale, the conflict between the right to develop and the right to preserve is resolved by a legislative evaluation of the comparative costs and benefits of each.[52] Spillover effects may be constitutionally restrained in spite of the severe economic loss imposed by the prohibition on development.[53] The presence of interdependent spillover effects distinguishes the regulation of vulnerable land resources from land-use regulations that merely provide a greater net benefit to society.[54] The latter case requires compensation while the first is merely a valid use of the police power to avoid harmful spillovers on land use.[55]

This rationale for a severe limitation on the development of land has been most forcefully applied in cases upholding the constitutionality of restrictive wetlands regulations. In these cases, either a state statute or a local ordinance limits the development of wetlands to minimal uses that neither require major development nor disturb the wetlands area. While the rationale for these cases is not always clear, they can be explained by the spillover control theory outlined above. The ability of these cases to support similarly restrictive emission quota limitations will be considered later.

One important wetlands case adopting this theory, *Sibson v. State,*[56] was decided by the New Hampshire Supreme Court, which upheld a prohibition on a proposed fill in a wetlands area. It found the salt marsh in question to be a valuable ecological asset to the area's seacoast and held that the proposed fill would do "irreparable damage to an already diminished and irreplaceable natural asset."[57] In addition, the court felt that a neighboring large flow of water would "magnify the deleterious effect which the fill would have upon the entire 100 acres of the marsh."[58]

The landowner did not contest the constitutionality of the state's power to regulate land use in the salt marsh but claimed that a denial of a permit to fill the marsh rendered the land economically useless and constituted a taking of property. Giving minimal recognition to the diminution in the value of the land, the court sustained the permit denial and held that the police power could be used to proscribe activities harmful to the public.[59] In its treatment of the conflict between these competing demands, the court gave heavy weight to the "importance of the public benefit which is sought to be promoted against the seriousness of the restriction of a private right sought to be imposed."[60]

The commons doctrine is also recognized in another important wetlands case, *Just v. Marinette County*.[61] In this case the Wisconsin Supreme Court upheld a local wetlands ordinance, enacted pursuant to state mandate, that severely restricted land uses in wetlands areas. Again, the landowners had been prohibited under this ordinance from filling the marsh for purposes of development. While the court's decision is plagued with inconsistencies, its recognition of the commons doctrine is clear:

> [W]e have a restriction on the use of a citizen's property, not to secure a benefit for the public, but to prevent a harm from the change in the natural character of the citizen's property... What makes this case different...is the interrelationship of the wetlands, the swamps and the natural environment of shorelands to the purity of the water and to such natural resources as navigation, fishing, and scenic beauty.[62]

Another important decision in which regulatory restraints on land use were upheld in order to preserve environmental values is *In re: Spring Valley Development*,[63] decided by the Maine Supreme Judicial Court. The statute upheld was a unique Maine law requiring a permit for all major development, including residential subdivisions. Permits were to be refused if the development had an adverse effect on the natural environment. In upholding the constitutionality of the statutory permit requirements, the court expressly noted that land-use restrictions preserving the quality of the air, soil, and water were within the police power.[64]

Although the Maine statute did not expressly limit land use, a refusal of a permit under the act clearly could have a confiscatory effect on the landowner. A permit can be denied for a use of the land that has an adverse environmental effect and in this situation no developmental use may be allowable under the statute. In this event the court noted that the public welfare "demands" that the land be used for another purpose.[65] Later in the opinion, the court modified this dictum by stating that the impact on the environment must be unreasonable before a permit can be refused.[66]

These environmental land-use control cases represent a significant trend in the case law. The importance of the public purpose in preserving the environmental status quo in a common environmental resource has been given significant judicial weight. Even though all developmental use of the land may be restricted, the court accords priority to the public interest in preserving a natural resource area and avoiding undue harm to the environment. No balancing of public purpose with private restriction is apparent here. In the wetlands cases, this balancing process is part of the legislative decision limiting developmental uses in the wetlands area.[67]

Whether the wetlands cases and the Maine case can be applied to the application of emission quota strategies is another matter. Like a wetlands, the air is a common resource. Consequently, there is no more an *a priori* right in a landowner to engage in a land use that pollutes the air than there is an *a priori* right in a landowner to engage in a land use that endangers an environmental resource area.[68] Indeed, the Maine court listed air quality as an environmental resource entitled to protection under the state act.[69]

Nevertheless, there are differences in the wetlands and air quality cases. Air is pervasive; it is enjoyed by all but it is enjoyed by all everywhere. In the wetlands example, the prohibition on land use is co-extensive with the protected land resource. In the air quality example the prohibition on land use is not co-extensive with the protected air resource.[70] As an emission quota is administered, some landowners will be allowed to develop their land while some will not. Protection of the common air quality resource is brought about through a land use policy which is based on uniformly applied criteria but has differential impacts on the landowners affected by it.[71] This policy may raise equal protection problems, which are discussed Sec. 3.3, but the due process taking problem that arises cannot be supported by a blanket prohibition on all development, equally applied, that occurs under wetland restrictions.

The situation that occurs in this example resembles the restriction on development imposed on an owner of an isolated historic landmark. In that situation, the argument was made that to concentrate the force of the restriction on a single landowner for the purpose of conferring a diffused public benefit may not be tolerable. The same argument can be made when the force of an emission quota is concentrated on a single landowner so that the public may enjoy the benefits of clean air.

While a refusal to allow polluting development on a single industrial site to enforce an emission quota may present difficult taking problems, more than one site may be available for development in an area subject to emission quota restrictions. The question to ask is whether the availability of alternative sites precludes due process taking objections when polluting development is forclosed on a site that happens to be owned by an industrial developer.

While the availability of alternative sites as a defense to taking objections has not been heavily litigated, one important case accepting this defense is *Bosse v. City of Portsmouth.*[72] In this case the municipality rezoned a 4.2 acre tract surrounded by residentially zoned land to a light industrial use. More than 850 acres of industrially zoned land had been provided in the city, and more than 690 of these acres were vacant. The court reversed the rezoning, noting that the rezoning was discordant with uses in the surrounding area[73] and that there was available vacant and zoned industrial land elsewhere in the city.[74]

A decision to disallow a rezoning because alternative sites are available is most easily supportable in the context of a comprehensive plan that provides community-wide designations for industrial development and that has been implemented through a zoning ordinance allocating the designated areas to industrial use. As the Oregon Supreme Court has pointed out, the "integrity of comprehensive planning would be seriously compromised if a property owner could obtain a zone change on the ground that...his proposed development would be less profitable in an appropriately zoned area."[75] Oregon is one of several states that require zoning to be consistent with an adopted local comprehensive plan.[76] The courts in these states can be expected to protect the integrity of the plan by looking with disfavor upon zoning changes that threaten prior zoning allocations consistent with the plan.[77]

A similar judicial attitude is apparent in those cases, like *Bosse*, in which the alternative site defense is raised to a rezoning but no comprehensive plan has been adopted. In these cases the rezoning has been attacked by landowners adjacent to the rezoned site, the municipality must find some policy basis to defend the rezoning,[78] and the availability of alternative sites undermines this defense.[79] The alternative ground for the decision in *Bosse*[80] must also be considered; the surrounding residential zoning also undermined the industrial rezoning struck down in that case. In the case likely to arise under emission quotas, the area surrounding the site on which polluting industrial development is refused is likely to be zoned or developed for industrial use. This fact supports rather than undermines the argument that the restricted site should also be industrially zoned.

Nevertheless, at least when the comprehensive plan supports existing and future industrial zoning, an argument can be made that due process does not require rezoning of another site in another area so that industrial development may occur. The developer compelled to seek an alternative and previously zoned site at most faces higher acquisition costs. Higher costs will prevail if the alternative site is more favorably located for industrial development or if the semimonopoly conferred on the owner of the alternative site results in a higher price. Developers should not be allowed to raise due process objections to zoning restrictions which require that they seek sites at more costly locations. The higher price that may be required for a previously zoned site may well be within the range of tolerance allowable by the due process clause. One difficulty that may arise with the alternative site defense in the non-EDZ emission quota context is that no available sites may remain on which industrial development can occur witout violating the quota. In this event, of course, the alternative site defense will not be helpful.

So far in the discussion it has been assumed that the restriction on land use imposed under an emission quota is permanent, thus potentially raising a due process taking problem. There may be reason to believe that in some instances this restriction will be temporary. Rapid imporvements in air quality in areas using an emission quota may allow pollution sources to locate on initially restricted land in at least two ways. Existing polluting industries may move or shut down. Construction of new pollution sources on land initially restricted under the emission quota would then be permissible. Reductions in existing pollution levels may also occur through the use of pollution control technology by existing industrial polluters. Indeed, the nonattainment area provisions of the Clean Air Act direct that reasonable further progress be made toward attainment of NAAQSs. In nonattainment areas, then, it is reasonable to expect that improvements in baseline pollution levels will add increments to the emission quota and permit the development of initially restricted land.

From this perspective, a restriction on industrial development imposed under an emission quota may be viewed as temporary. The question that next arises is whether the temporary nature of the restriction sustains its constitutionality by forestalling taking objections. This issue was examined in the *Ramapo*[81] decision. The land-use control program in this case imposed a development quota within the municipality which fluctuated according to the availability of public facilities and services.[82] The decision can be construed as upholding a restriction that defers, but does not permanently prohibit, development.[83]

The duration of the development restriction in the *Ramapo* case was substantial. Development in some areas of the municipality was to be deferred for periods up to 18 years. A delay of this magnitude was arguably suspect, since other cases approving interim restrictions on development have emphasized that a restriction would be considered unreasonable if extended beyond a relatively brief period.[84] Nevertheless, the 18-year delay was upheld in the *Ramapo* decision. In reaching this conclusion, the New York court was impressed with the commitment made by the municipality to providing capital facilities and services that would make development possible:

> Without a doubt restrictions upon the property in the present case are substantial in nature and duration. They are not, however, absolute. The...[ordinance] contemplates a definite term, as the development...[restrictions] are designed to operate for a maximum period of 18 years and during that period the Town is committed to the construction and installation of capital improvements.[85]

While the *Ramapo* case supports the view that a development restriction imposed under an emission quota can be considered temporary, it is nevertheless possible to distinguish the emission quota from the *Ramapo* development control program. In *Ramapo*, the municipality was committed to development over the 18-year period and the developer was guaranteed the right to develop once public services and facilities were made available. When emission quotas are imposed as part of an air quality control program there is no absolute guarantee that at some time, let alone within a reasonable period, development restricted by the emission quota will be allowed to proceed. If so, *Ramapo* may not be good authority for the proposition that restrictions imposed under emission quotas can be sustained as temporary.[86]

A contrary argument can be made whenever emission quotas are imposed in air quality control regions that are nonattainment areas. Reasonable progress toward attainment must be made in these areas, and the attainment timetable presently in effect is relatively short. In these circumstances, land development restrictions imposed under an emission quota can be constitutionally supported as temporary restrictions on land use.

It also is possible that alternative nonpolluting uses of the property may be possible. There is no due process requirement that a use of land be allowed to pollute the air in order to forestall a taking objection. There may be a variety of uses, e.g., warehouses, freight terminals, or storage yards, which are compatible with uses in an industrial area and which cause little sulfur dioxide and particulate pollution. As long as some reasonable use of the property remains, no taking has occurred.[87] What is important in this situation is a careful tailoring of the local zoning ordinance so that alternative nonpolluting uses will not be restricted. In addition, the availability of other industrially zoned sites will provide alternative opportunities for industrial uses and help forestall taking objections.

Another possibility to consider is the careful administration of local zoning controls so that the situation described in the example stated does not arise. These opportunities will first be examined on the assumption that a jurisdictional emission quota has been adopted; the emission quota is applied to an entire jurisdiction.

Zoning controls for industrial uses may generally be administered in one of two ways. Areas for industrial use may be zoned in advance so that industrial uses are permitted as of right in industrially zoned areas. As an alternative, no industrial zones may be mapped in advance. Under this alternative, industrial uses are permitted on a case-by-case basis as applications for industrial development are presented to the local zoning agency. This second mode of zoning control may be exercised through the zoning amendment process or through administrative techniques such as the floating zone.

Taking problems are likely to occur if industrial development using the best available control technology occurs in industrial zones where further development would cause a violation of the non-EDZ quota. This problem can be avoided if the municipality links its industrial zoning with the areas in which industrial development can occur consistent with the emission quota.[88] If the municipality also underzones for industrial use in relation to the allowable emission quota, the likelihood that taking problems will arise will be correspondingly reduced. There is no requirement that available industrially zoned land precisely equal industrial demand. The municipality can always forestall taking and other legal problems arising out of underzoning by amending the zoning map in critical cases to allow additional industrial use. In short, the local zoning ordinance operates as a veto on the allocation of emissions under the emission quota. It can help allocate industrial use consistent with the quota so that taking problems will be avoided.

Difficulties may arise under this system if the market does not respond to the local industrial zoning. Industrial developers may then seek zoning map amendments for industrial development outside prezoned industrial areas, and upset the use of a zoning strategy to reinforce the emission quota. As noted earlier, there is authority supporting a local refusal of additional industrial zoning when pre-existing industrial zoning is available that is adequate for local needs.[89] Municipal resilience to attacks on the zoning allocation is essential in this situation.

An even more effective local control over the allocation of the emission quota is available if the municipality does not prezone for industrial use but allows industrial development to occur on a case-by-case basis through a floating zone or similar technique. Under this method of administration, the municipality can control new industrial development consistent with the emission quota and can prohibit polluting development under its zoning ordinance once the quota is exhausted. Difficulties in the preclusion of additional polluting industrial development in the community should not occur so long as taking problems illustrated by the example given earlier do not arise.[90]

The difficulty with this approach is that the standards adopted to administer the floating zone or similar technique may not permit a refusal of polluting industrial development. Usually, these standards allow polluting industrial development provided it is consistent with adjacent uses. A prohibition on polluting industrial development when it is compatible with adjacent uses may be successfully attacked by the developer.

A possible remedy for this problem exists. If consideration of adverse effects on air quality, as evidenced by a violation of the emission quota, is incorporated into the floating zone standards, the process will resemble the statutory site permit upheld in the *Spring Valley* case,[91] which validated adverse environmental impact as the basis for refusing a development permit. The incorporation of emission quota criteria into the local zoning ordinance creates a basis for considering air quality impacts under the floating zone technique. Assuming that this kind of ordinance is authorized under the state enabling statute, it will present no constitutional problems under the *Spring Valley* theory.

If emissions are allocated on a case-by-case basis through a floating zone emission quota, the nature of the taking problem may vary but the underlying constitutional issues are the same. One problem that arises is that the opportunities for controlling industrial development through the zoning ordinance are not as easy to provide as they are when the emission quota is applied to an entire jurisdiction. Because the floating zone emission quota is applied to the area surrounding the industrial site and not to the entire municipality, taking problems will arise on a case-by-case basis.

When the floating zone emission quota is used, the zoning strategy which appears best adaptable to the quota at the local level is the floating zone. As in the case of the jurisdictional emission quota, the decision to allow polluting industrial use under the floating zone procedure will be made at the same time as the decision to allocate the emission quota. Likewise, standards can be included in the floating zone ordinance that allow a refusal of the new polluting industrial use for noncompliance with the emission quota on the ground that allowance of the use will have an adverse effect on air quality. As indicated earlier, the application of these standards to disapprove polluting industrial development under the floating zone ordinance should withstand constitutional attack.

Due process taking objections of a different variety may arise under emission density zoning. This technique does not permit the disapproval of a pollution source if the owner of the source can acquire enough land to bring his emissions under the quota. The question then becomes whether EDZ is vulnerable because the land assembly requirement is disproportionate to the amount of pollution the source emits. If EDZ is vulnerable on this ground, there is a risk that a court will find it unconstitutional as a taking if the land required for any one source is excessively disproportionate to the source's size.

This argument assumes that the land assembly requirement is measured against the size of the source. An alternative assumption can be made: that the constitutionally allowable land acquisition should be measured by the amount of pollution emitted by the source. The land assembly requirement, no matter how onerous, can then be justified as a permissible internalization of the otherwise unacceptable effects of the pollutants that the source generates.

There is support for the cost internalization approach to justify the acquisition of additional land in *State v. Gallop Building*,[92] a case decided by the New Jersey intermediate appellate court. In that case the landowner owned two adjacent lots, one of which was occupied by an office building. A local ordinance required a buffer strip planting on that part of the lot adjacent to a residential district, and the application of this requirement in this case deprived the owner of 20 feet of the width of the two lots, which was 100 feet. An argument was made that this requirement amounted to a taking, but the court did not accept it, noting that "[i]n considering the validity of the ordinance generally, we cannot limit ourselves to its impact on the property of a particular defendant."[93] Nevertheless, the court also indicated that an ordinance of this kind might be invalid as applied to a particular landowner. It noted that the width of the buffer strip is a function of the nature of the use; a large shopping center, for example, might require a buffer strip of considerable width while in this case the buffer strip requirement approached the limits of reasonableness. The case was remanded so that the landowner could apply for a variance from the buffer strip requirement, and file another action to challenge the constitutionality of the buffer strip requirement should the variance be denied.

The theory of the *Gallop* case can be applied to emission density zoning to support the constitutionality of an acquisition of land necessary to meet the emission density zoning quota. A rule of proportionality can be applied, as in that case, that relates the emissions produced by the industrial use to the amount of the land required. Because the land acquisition requirement is related to the emissions generated by the industrial source, the acquisition of land to satisfy the EDZ requirement can be justified as an acceptable method for internalizing the adverse effect of the air pollution emissions.

The *Gallop* case also underlines the assumption, which appears common to zoning cases, that the constitutionality of the zoning restriction is tested for its applicability to the unit of land ownership even though the restriction is justifiable in concept as a proper application of the police power. Implicit in this assumption is the corollary that the regulating agency cannot demand compliance with the regulation by compelling the purchase of additional land.

These assumptions have been tested in other regulatory settings, one of which is local subdivision control. Subdivision controls govern the platting and preparation of vacant land for urban development, and are usually restricted to single-family residential development projects. They provide criteria for subdivision layout and internal subdivision streets and facilities, and may also require land dedications for facilities such as streets, parks, and schools that are required for, or associated with, the subdivision.[94] Like emission density zoning, the requirements and dedications imposed by subdivision control also serve to internalize costs.

While the case law on subdivision land dedications is unsettled, recent cases appear to have accepted subdivision dedications as constitutional whenever the use of the dedicated land meets a public need generated by the subdivision by charging the development for facilities that otherwise would have to be paid for with general public revenues. While there are only scattered cases on the point, the courts again appear to have held that, while land dedications are generally acceptable as a police power requirement, they will be found unconstitutional if they are excessively burdensome to a particular developer.[96]

Another regulatory program that raises similar taking problems is the official map. An official map is not a cost-internalization control. It aids public land acquisition programs by holding land in an undeveloped state until a public agency is ready to acquire it for designated public purposes, such as highways or parks. Privately-owned land shown on an official map adopted by a state or municipality is prohibited from development until it is acquired for public purpose.[97]

Constitutional objections have been brought to the official map on the ground that the temporary restriction on land development imposed by the official map constitutes a taking of land. These objections have usually been rejected as long as the restriction is not maintained for an unreasonable period of time,[98] but the courts have also made it clear that an official map will be held unconstitutional as a taking of property if an excessive amount of land in one ownership is restricted.[99]

There is some reason to believe that the land assembly requirement imposed by EDZ may be constitutional, even under the restrictions imposed by the land buffer, subdivision control, and official map cases. As discussed above, the official map cases can be distinguished because the official map is not a cost-internalization control. If the official map is so restrictive that no development can occur on that part of the land not covered by the official map, it can be argued that a taking has occurred as soon as the official map has been imposed. A different problem arises under the land buffer and subdivision control regulations. These controls internalize costs that should appropriately be borne by the development and serve the same function as emission density zoning. Cases considering excessive land restriction under these controls can be read as approving these restrictions only when they are proportionate to the internalized cost. In the emission density zoning context, it can be argued that the land acquisition required to meet the EDZ requirement is proportional to the pollution emitted by the development. If so, the land buffer and subdivision control cases would appear to approve the land acquisition requirement.

There is a counterargument, however. At least in the subdivision control and official map cases, courts persuaded that a taking has occurred when land is excessively restricted appear impressed by the fact that excessive limitation on development substitutes for a physical taking of the land by the public agency. In the official map situation, for example, a total temporary restriction on land development on any one site functions effectively as if the public agency had physically appropriated the land. The same result occurs when the subdivision control ordinance is used to require a land dedication for a street or park. Once more, the dedication of land by the developer is an alternative to its acquisition by a public agency.

Similar arguments can be made in the air quality control context. As an alternative to the acquisition of land to satisfy an emission density zoning quota, the public agency could acquire land suitable for industrial development and hold it free of development in order to meet the EDZ quota limitations. The difference between this situation and the subdivision control and official map situation is that air quality control agencies do not normally acquire land for air quality control purposes. Whether this distinction will be seen as controlling is open to conjecture.

One final problem may arise in the emission density zoning context that requires discussion. This argument, which is included for completeness, assumes that (1) a polluting industrial facility cannot reduce its emissions through plant-size reductions or the use of pollution control equipment, and (2) alternative land uses are not possible. If the land owned by an industrial developer is not sufficient to comply with the emission density limit under the emission density zoning requirement, additional and probably adjacent land will have to be acquired. The problem of acquiring additional land does not arise under land buffer, official map, or subdivision control situations; in these cases, any restrictions on, or dedications of, land are applied to the land within the owner's control at the time the property is developed. Under EDZ, the necessity to acquire additional land may create additional constitutional problems.

There has been little consideration of requirements that a landowner acquire additional land in order to comply with land use control restrictions. This situation, of course, may often arise under residential density requirements. Enough land must be assembled by a developer in order to build dwelling units and still comply with applicable density requirements. Ordinarily, this type of land assembly should not raise legal questions. There is no vested right to the development of vacant land, and developers who wish to develop must comply with applicable restrictions before they can do so.[100]

3.2.3 Summary

Land use restrictions imposed under emission quotas raise potential taking problems whenever the restriction deprives the owner of all reasonable use of the land. The question to consider is whether these restrictions on land development are so severe that a taking argument will be successful. While it is possible, at least in some states, that taking objections to the application of the emission quota will be sustained, a developing trend in the cases indicates that the taking argument may not prevail except in extremely severe instances of land use restriction.

A series of arguments has been presented here that may overcome the taking objection. One is based on the trend of authority in cases upholding wetlands restrictions. These decisions would uphold restrictions on development imposed under emission quotas as necessary to protect the public interest in air resources.[101] Another argument would rely on recent judicial decisions which require a severe deprivation of development opportunity before a taking is found to occur.[102] A final argument would view a restriction on land use imposed under an emission quota as temporary and thus sustainable as an interim restriction on land development.[103]

How successful these defenses to the taking argument will be depends on the disposition of the court asked to decide the question. Not all courts are hospitable toward wetlands and similar restrictions on land use. Not all courts take restrictions on land development lightly when a confiscation argument is raised. In many instances it will be difficult to view a land use restriction imposed under an emission quota as temporary. Nevertheless, this review of the decisions does suggest that in many instances taking objections to land use restrictions imposed under an emission quota may be defended successfully.

3.3 EQUAL PROTECTION

Equal protection issues are more likely to arise if emission quotas other than EDZ are implemented. Regulations will have to be designed to preclude the possible problems with non-EDZ emission quotas outlined here. These issues will be of concern if administration of the quota may foreclose land development simply because the proposed development is either too early or too late. Two examples immediately come to mind. In the first, an industrial development is prohibited because it comes too soon. Permission to develop may be denied because the development is so large or so located that it would substantially exhaust the quota. In the second example, polluting industrial development is denied because it is too late and cannot proceed because the emission quota has been completely exhausted or because the emissions to be produced are in excess of those that remain to be allocated.

Unfortunately, there is very little legal precedent to assist in analyzing this constitutional claim. The problem of the late developer is especially difficult. As Krasnowiecki has pointed out, "[t]here was a sense running through standard zoning that you cannot establish regulations for an area that would allow one landowner to deprive the other of a pro-rata share of permissible development."[104] In other words, as applied in the emission quota context, there was acceptance of the principle that the quota cannot be filled on a first-come basis if development will be prohibited on any land subject to the quota once it has been exhausted. This problem does not arise under traditional zoning ordinances. Traditional residential zoning assigns a density limitation to all zoning districts, but each parcel of land within the district is entitled to the allowable density. The density for a district is not exhausted under the traditional zoning ordinance or EDZ until all land within a district has been developed.

The *Ramapo*[105] decision again provides an analogous situation in which the validity of a timing program which deferred development in some areas of the municipality was considered. Under the *Ramapo* program, some development was deferred on undeveloped land because necessary public facilities and services were not available. Likewise, it is possible that late-coming developers would be denied permission under the *Ramapo* program if the municipality decided that additional provision of facilities and services would not be made. (The second, latent issue was not considered in the *Ramapo* case.)

Deferral of development under the *Ramapo* program was upheld by the New York court because it viewed the restrictions imposed as "a bona fide effort to maximize population density consistent with orderly growth"[106] and as a means "to insure continuous development commensurate with the Town's obligation to provide"[107] the necessary facilities. The court thus upheld a timed growth program that deferred development in some areas of the municipality in order that growth might be orderly. It is equally reasonable to manage growth and development in a community so that air quality objectives will be achieved. In administering a non-EDZ emission quota, for example, it may be important at some stages of the program to disallow some development in order that the emission quota can be fairly allocated. Disallowance of heavily polluting developments in the early stages will prevent an overload on the non-EDZ quota and permit a fairer allocation of the quota among other developments. This method of quota allocation is supportable by the *Ramapo* decision. While fairness in allocation was not explicitly a part of the *Ramapo* program, the decision to time new development in relation to the provision of new facilities and services was made in order to prevent an overload on existing facilities and monitor new growth in an orderly manner. *Ramapo* thus supports fairness and orderliness in the allocation of development over time when an acceptable community objective is to be attained. Air quality improvement is as acceptable a community objective as the orderly provision of new facilities.

There have been a few cases, however, in which the courts have not allowed a deferral of development in order to arrive at a more preferable future development pattern. These cases stress the due process taking problems inherent in these limitations. Nevertheless, timing considerations are implicated in these cases because the use of time as an acceptable element in land-use control was not recognized. For example, in *Petersen v. City of Decorah,*[108] the Iowa Court of Appeals considered the constitutionality of an agricultural district classification by the city that was "intended to reserve areas suitable for nonagricultural use until the land is needed for development in accordance with a future land use plan."[109] In this case the city had refused a rezoning for a shopping center on the grounds that the land should be reserved for future industrial use. The court noted that "[t]he contention by the city that it placed Petersen's land in a 'holding' classification until the right industry comes along must be assessed against the fact that no new industry has been attracted to Decorah since 1964."[110]

A taking was found to have occurred because the property owner would be forced to hold the land for an unpredictable period subject to the payment of heavy taxes. There was no possibility for productive use of property under the agricultural district classification because the land was not suitable for agricultural purposes.

A similar case came before the Michigan Supreme Court in *Biske v. City of Troy*.[111] In this case the city had zoned land at a street intersection for office use pursuant to a comprehensive plan for the municipality that proposed a civic center for the area, to be surrounded by shopping centers, office buildings, and parking facilities. Plaintiffs had asked for and been refused a rezoning for a gasoline station on the site. Although the Michigan Court of Appeals initially upheld the refusal, giving credit to the comprehensive plan,[112] the Michigan Supreme Court reversed and found the refusal to rezone for a gasoline filling station unconstitutional. The Michigan Supreme Court relied heavily on the fact that the comprehensive plan had not been officially adopted. It also noted that if the refusal to rezone were sustained the "hapless property owner" must wait, pay taxes and hope "that either the anticipated development will come shortly or that the zoning authority will release to some extent its griphold of his property."[113]

There are similarities between the fact situations in these cases and the situation presented when development is deferred under a non-EDZ emission quota in the hope that future development will either be better located or emit less pollution. Both the Iowa and Michigan cases suggest that deferring development because of plans or policies that suggest an alternative preferred development for the site will not be accepted, especially when the site cannot be put to an interim productive use. This situation is likely to occur if development is deferred under a non-EDZ emission quota allocation process. While these cases relied on due process taking objections to the deferral, they implicitly reject timing of development as a basis for overcoming the taking objection. They also suggest the presence of an equal protection objection if decisions to approve development have a timing element.

The problem of the rejected late developer was considered to some extent in another growth management case decided by a Federal Court of Appeal, *Construction Industry Association of Sonoma County v. City of Petaluma*. In this case the city imposed a five-year, 500-unit annual quota on new housing development within the city in order to achieve a more orderly growth pattern. This annual quota was sustained against due process objections. The court noted that the adoption of the quota for growth management purposes served acceptable police power objectives.[115] It did not discuss the effect of the quota on developers prohibited from carrying out new housing development in any one year once the quota was exhausted. Neither did the court consider the equal protection problems implicit in this restriction. The opinion can still be considered as endorsing quota restrictions that have the effect of precluding development once the quota is no longer available. This conclusion is reinforced by a footnote to the opinion[116] in which the court noted that its inquiry was "not unlike" the inquiry it would have had to make had an equal protection objection been raised. It then noted that most legislation discriminates among various classes of persons and business enterprises and applied the usual rule applicable to economic discriminations of this type. This rule rejects an equal protection challenge if the restriction bears a rational relationship to a legitimate local interest.[117] The inference here is that a timing plan related to growth management objectives is legitimate, even though that plan will necessarily preclude some development once the quota adopted by the plan is exhausted. Likewise, an air quality objective should be equally legitimate as a basis for imposing a quota allocation system for new development.

What differentiates the *Petaluma* quota from a non-EDZ emission quota is the temporary nature of the *Petaluma* restrictions. These restrictions were enacted for an initial period of five years. The court noted in another footnote[118] that its decision was not to be construed as a permanent endorsement of the quota, since it could be abandoned after the initial five-year period. In contrast, the air pollution emission quota is permanent once the emissions allocated by the non-EDZ quota have been exhausted and polluting development is curtailed, unless changes in emission levels allow additional polluting development. Exhaustion of the non-EDZ emission quota raises due process taking and not equal protection objections, however. The permanent nature of the emission quota does not affect the basis for making emission allocations over time, which was arguably approved in the *Petaluma* case.

The equal protection problems raised by the jurisdictional emission quota are nearly identical to those raised in the cases discussed earlier, especially in the *Ramapo* and *Petaluma* decisions. As in those cases, the emission quota is applied on a jurisdictional level and allocates development within the jurisdiction over time in order to implement air quality objectives. Due to the similarity in the use of phasing requirements and quotas to implement air quality and growth management objectives, these cases support the constitutionality of air pollution emission quotas when administered over time. A contrary indication is provided by the Michigan and Iowa cases, although these cases did not address the equal protection problems raised by quota administration. Instead, the courts based their opinions on the due process taking that occurs when development of a site is temporarily restricted. These cases do indicate that the deferral of development so that more appropriate development can occur at a future date may be invalidated by courts on due process grounds. This conclusion is somewhat contradicted by the generally favorable judicial reception of interim prohibitions on development pending adoption or revision of a zoning ordinance or comprehensive plan.

Since the floating zone emission quota does not necessarily allocate emissions by jurisdiction, the administration of the quota over time in some cases cannot be defended by the plans or policies of a single governmental unit, as occurred in the *Ramapo* and *Petaluma* cases. In these situations nevertheless, the judicial support of timing programs evidenced in the cases should support the administration of the quota when development is disapproved because it is premature or because the quota is exhausted.

3.4 FOOTNOTES

1. Traditionally, state and local government restrictions and prohibitions on the use of property are valid if they are employed to protect the health, safety, morals or public welfare of the community. Village of Euclid v. Ambler Realty Co., 272 U.S. 365, 375 (1926). A modern approach to the police power recognizes that "as a commonwealth develops politically, economically, and socially, the police power likewise develops, within reason, to meet the changed and changing conditions." Candlestick Properties, Inc. v. San Francisco Bay Conservation & Dev. Comm'n, 11 Cal. App. 3d 557, 89 Cal. Rptr. 897, 905 (1st Dist. 1970), citing, Miller v. Board of Pub. Works, 195 Cal. 477, 484, 234 P. 381, 383 (1925).

2. The exercise of the police power by the destruction of property which is itself a public nuisance, or the prohibition of its use in a particular way, whereby its value becomes depreciated, is very different from taking property for public use, or from depriving a person of his property without due process of law. In the one case, a nuisance only is abated; in the other, unoffending property is taken away from an innocent owner. Mugler v. Kansas, 123 U.S. 623, 668-69 (1887).

3. Fred French Inv. Co. v. City of New York, 39 N.Y. 2d 5, 8 (1976).

4. The constitutionality of zoning in general was upheld in the landmark decision of Village of Euclid v. Ambler Realty Co., 272 U.S. 365 (1926).

5. Eminent domain is the "power of the sovereign to take property for public use without the owner's consent." 1 P. Nichols, The Law of Eminent Domain § 1.11 at 2 (3d ed. 1950).

> Under the power of eminent domain property cannot be taken for public use without just compensation. However, under the police power, property is not taken for use by the public; its use by private persons is regulated or prohibited where necessary for the public welfare.

Candlestick Properties Co. v. San Francisco Bay Conservation & Dev. Comm'n., 11 Cal. App. 3d 557, 572, 89 Cal. Rptr. 897, 906 (1970).

6. The fifth amendment provides that "private property [shall not] be taken for public use, without just compensation." U.S. Const. Amend. V. This requirement is made applicable to the states through the fourteenth amendment. Chicago, B. & Q. R.R. v. City of Chicago, 166 U.S. 226, 235-41 (1897)

7. Justice Holmes notes that when the exercise of the police power renders the regulated property "wholly useless, the rights of property would prevail over the other public interest, and the police power would fail." Hudson County Water Co. v. McCarter, 209 U.S. 349, 355 (1908). This principle is illustrated in the Averne Bay case. As a means to forestall development of a rural area, the municipality zoned the owner's property residential. The New York Court of Appeals recognized that his property had no present practical value as zoned.

> An ordinance which *permanently* so restricts the use of property that it cannot be used for any reasonable purpose goes, it is plain, beyond regulation, and must be recognized as a taking of the property. The only substantial difference, in such case, between restriction and confiscation is that restriction leaves the owner subject to the burden of payment of taxation, while outright confiscation would relieve him of that burden.

Averne Bay Constr. Co. v. Thatcher, 278 N.Y. 222, 232, 15, N.E. 2d 587, 592 (1938) (emphasis in original).

8. Fred French Inv. Co. v. City of New York, 39 N.Y. 2d 587, 593-94, 350 N.E. 2d 381, 385, 385 N. Y. S. 2d 5, 8 (1976). Chief Judge Breitel noted in *French* that many cases have erroneously equated the "overly burdensome" restriction with a 'taking' under eminent domain. *Id.*

9. See *supra* note 7.

10. Mr. Justice Holmes stated: "While property may be regulated to a certain extent, if regulation goes too far it will be recognized as a taking." Pennsylvania Coal Co. v. Mahon, 260 U.S. 393, 415 (1922). See

Lutheran Church in America v. City of New York, 35 N.Y. 2d. 121, 129, 132, 316, N.E. 2d 305, 310 312, 359 N.Y. S. 2d. 7, 14, 16 (1975) ["Confiscatory"]. See also Sax, Takings and the Police Power, 74 Yale L.J. 36, 41-46 (1964).

11. There are many problems with the diminution of value approach. One problem concerns the difficulty in finding a standard against which a diminution in value can be measured.

12.

> Government could hardly go on if to some extent values incident to property could not be diminished without paying for every such change in the general law. As long recognized some values are enjoyed under an implied limitation and must yield to the police power. But obviously the implied limitation must have its limits or the contract and due process clauses are gone. One fact for consideration in determining such limits is the extent of diminution. When it reaches a certain magnitude, in most if not all cases there must be an exercise of eminent domain and compensation to sustain the act. So the question depends upon the particular facts.

Pennsylvania Coal Co. v. Mahon, 260 U.S. 393 at 413 (Brandeis, J., dissenting). For a fascinating revisionist approach to due process taking problems see B. Ackerman, Private Property and the Constitution (1977).

13. The harmful or noxious use test is also referred to as the avoidance of harm test. This test sustains regulations of property use to prevent harm if either they do not affect the landowner's title or amount to a seizure of his property. Regulation to avoid harm was valid irrespective of the economic burden imposed on the landowner. See Comment, Regulation of Land Use: From Magna Carta to a *JUST* Formulation, 23 U.C.L.A. L. Rev. 904, 908 (1976). See also Pennsylvania Coal Co. v. Mahon, 260 U.S. 623 at 668-69.

14. Village of Euclid v. Ambler Realty Co., 272 U.S. 365 (1926).

15. *Id.* at 387.

16. *See* note 10, *Supra.*

17. Under the original Holmes formulation of the diminution in value test, a finding of a "reasonable remaining use" was necessary, though not sufficient in itself to sustain a regulation. Comment, Regulation of Land Use: From Magna Carta to a *JUST* Formulation, 23 U.C.L.A. L. Rev. 904, 922 n. 94 (1976). The new interpretation significantly departs from the standards used in the original test. The revised interpretation recognizes the paramount power of the state to regulate valuable and scarce resources in the public interest over the landowner's potential loss caused by the taking of a developmental right. It accepts a finding of a reasonable remaining use as both necessary and sufficient to sustain a restriction. *Id.*

18. 41 N.Y. 2d. 434, 361 N.E. 2d 1025, 393 N.Y. S. 2d 995 (1977).

19. *Id.* at 437, 361 N.E. 2d at 1027.

20. *Id.* at 438, 361 N.E. 2d at 1027.

21. 41 N.Y. 2d 438, 361 N.E. 2d 1028, 393 N.Y. S. 2d 379 (1977).

22. *Id.* at 440-41, 361 N.E. 2d at 1030-31, 393 N.Y. S. 2d at 383-383.

23. *Id.* at 445-46, 361 N.E. 2d at 1034, 393 N.Y. S. 2d at 385. In contrast to a constitutional challenge, the standard used in area variance cases requires a showing of the economic impact upon the owner of a restriction affecting a single use permitted by the ordinance. *Id.*

24. *See* notes 19, 20 and 23 *supra*.

In a case involving a landmark preservation restriction the court noted:

> [T]he test to be applied is the same as in zoning cases, i.e.: Have the plaintiffs demonstrated that the regulation in issue deprives them of all reasonable beneficial use of their property?...
>
> Plaintiff's burden, in such connection, is to establish that they are *incapable* of obtaining a reasonable return..., not that they are not receiving it.

Penn Central Transp. Co. v. City of New York, 50 App. Div. 2d, 265, 272-73, 377 N.Y. S. 2d 20, 28 (1975) (emphasis in original), aff'd, 42 N.Y. 2d. 324, 366 N.E. 2d 1271, 397 N.Y. S. 2d 914, 98 Sup. Ct. 2646, ___ U.S. _______ (1977). It should be emphasized that the New York cases have been presented as illustrative. They are not necessarily typical of all jurisdictions.

25. 30 N.Y. 2d 359, 285 N.E. 2d 291, 334 N.Y. S. 2d. 138, appeal dism., 409 U.S. 1003 (1972).

26. *Id.* at 367, 285 N.E. 2d at 295, 334 N.Y. S. 2d at 143.

In an important minimum lot size case, the court further defined "reasonable remaining use" by distinguishing between an outright prohibition and a restriction enacted as a stop-gap measure. The court stated: "Though the value of the tract has been decreased considerably, it is not worthless or useless so as to constitute a taking." Steel Hill Dev., Inc. v. Town of Sanbornton, 469 F. 2d 956, 962 (1st Cir. 1972).

27. 30 N.Y. 2d at 381, 285 N.E. 2d at 304, 334 N.Y. S. 2d at 154-55.

28. 504 F 2d 646 (1st Cir. 1974).

29. *Id.* at 678.

30. *Id.* at 675.

31. *Id.* at 678.

32. *Id.* at 679.

33. Traditionally, the concept of a public right as superior to private property rights has had limited application in the law. Usually, such rights appeared in navigation servitude, public nuisance and the public trust doctrines. Sax, Takings, Private Property and Public Rights, 81 Yale L.J. 149, 155 (1971). Although there is a developing trend toward the acceptance of the public right doctrine, the conventional view is still prevalent. Any government regulation which diminishes the value of a private right so as to render it essentially worthless is a taking of property and compensation must be paid. *Id.* at 156 n. 16. See Dooley v. Town Plan & Zoning Comm'n, 151 Conn. 304, 197 A. 2d 770 (1964); State v. Johnson, 265 A. 2d 711 (Me. 1970); Morris County Land Improvement Co. v. Township of Parsipanny-Troy Hills, 40 N.J. 539, 193 A. 2d 233 (1964).

34. Penn Central Transp. Co. v. City of New York, 42 N.Y. 2d. 324, 366 N.E. 2d 1271, 397 N.Y. S. 2d 914, 98 Sup. Ct. 2646, ___ U.S. _____ (1977) [landmark]; Sibson v. State, 115 N.H. 124, 336 A. 2d 239 (1975) [wetlands]; Brecciaroli v. Commissioner of Environmental Protection, 168 Conn. 349, 362 A. 2d 948 (1975) [wetlands]; Just v. Marinette County, 56 Wis. 2d 7, 201 N.W. 2d 761 (1972) [wetlands]; Candlestick Properties, Inc. v. San Francisco Bay Community & Dev. Comm'n, 11 Cal. App. 3d 557, 89 Cal. Rptr. 897 (1970) [wetlands]; Trustees of Sailor's Snug Harbor v. Platt, 29 App. Div. 2d 376, 288 N.Y. S. 2d 314 (1968) [landmark]. Compare Lafayette Park Baptist Church v. Scott, 533 S. W. 2d 856 (Mo. App. 1977) [landmark]; Lutheran Church in America v. City of New York, 35 N.Y. 2d 121, 316 N.E. 2d 305, 359 N.Y. S. 2d 7 (1975) [landmark]. For a contrary view see cases cited *supra* note 33.

35. Fred French Inv. Co. v. City of New York, 39 N.Y. 2d 587, 596-97, 350 N.E. 2d 381, 387, 39 N.Y. S. 2d 5, 11 (1976); Westwood Forest Estates, Inc. v. Village of South Nyack, 23 N.Y. 2d 424, 244 N.E. 2d 700, 702, 287 N.Y. S. 2d 347 (1969); Opgal, Inc. v. Burns, 189 N.Y. S. 2d 606, 612 (Sup. Ct. 1959); Vernon Park Realty v. City of Mount Vernon, 307 N.Y. 493, 498, 121 N.E. 2d 517, 519 (1954). However, Judge Fuld, in his dissenting opinion in Vernon Park, illustrates the ease with which a regulation can be categorized either as conferring a public benefit or preventing a harm. *Id.* at 502, 121 N.E. 2d at 531.

36. The rationale expressed here is often used to invalidate landmark preservation and wetlands regulations. See *supra* note 35. It can also be used to invalidate emission quota restrictions.

37. The original harm test sustained policy power regulations which sought to prevent landowners from imposing a harm on adjacent lands or the community in general. A reinterpretation of this test now distinguishes between restrictions designed to prevent a landowner from inflicting a burden of external costs upon a neighbor or the community, and

restrictions requiring the landowner to provide some public benefit. Dunham, A Legal and Economic Basis for City Planning, 58 Colum. L. Rev. 650 (1958).

38. Village of Euclid v. Ambler Realty Co., 272 U.S. 365 (1926).

39. *Id.* at 387-88.

40. *See* text accompanying notes 1, 2, and 5, *supra.*

41. *See* text accompanying notes 49-55, *infra.*

42. The first major environmental case to adopt this approach was Just v. Marinette County, 56 Wis. 2d 7, 201 N.W. 2d 761 (1972). There, the court stated:

> [We must] re-examine the concepts of public benefit in contrast to public harm.... We start with the premise that lakes and rivers in their natural state are unpolluted and the pollution which now exists is man made.... This is not, in a legal sense, a gain or a securing of a benefit by the maintaining of the natural status quo of the environment... An owner of land has no absolute and unlimited right to change the essential natural character of his land so as to use it for a purpose for which it was unsuited in its natural state and which injures the rights of others.

Id. at 16-17, 201 N.W. 2d at 767-68.

43. *Id.* In Candlestick Properties, the court requoted the extensive findings of the California legislature that "the public has an interest in the Bay as the most valuable single natural resource of an entire region... [Filling in] San Francisco Bay... threatens the Bay itself and is therefore inimical to the welfare of both the present and future residents of the area surrounding the bay;..." Candlestick Properties, Inc. v. San Francisco Bay Conservation & Dev. Comm'n., 11 Cal. App. 3d 557, 564, 89 Cal. Rptr. 897, 900 (1970).

44. See Sax, Takings, Private Property & Public Rights, 81 Yale L. J. at 159 (1971). See also note 33, *supra.* For a critique of the Sax position see B. Ackerman, Private Property and the Constitution 54-56 (1977) (Sax places too much weight on avoidance of compensation as means to facilitate enactment of environmentally protective legislation).

45. Gold, The Welfare Economics of Historic Preservation, 8 Conn. L. Rev. 348, 353 (1970).

An example of this balancing process appears in Spring Valley. In this case the property owner contested the application of an environmental regulation to a subdivider. The court responded:

> [T]he Legislature intended. . . to prevent ecological damage before it occurs rather than to permit the occurrence of harm which can then be cured only at great public expense if at all. It is not unreasonable to place upon the subdivider. . . the responsibility for avoiding an inevitable large scale ecological calamity. . . The legislature reasonably concluded that the public welfare requires that control be exercised through the subdivider rather than attempting it through 90 different purchasers whose properties can perhaps never at that later point -- because of sheer weight and concentration of numbers -- avoid environmental misadventure.

In Re Spring Valley Dev., 300 A. 2d 736, 749 (Me. 1973).

46. See Gold, note 45, *supra*. at 352: "If the aggregate value of the [public] good to all these consumers equals or exceeds the cost of its production, then we have created value by producing the good."

47. *Id*. at 353.

48. *Id*.

49. Traditional takings doctrine is based solely upon the economic consequences of an action that occurs exclusively within the boundaries of the owner's property. If, however, we view property as a network of relationships, then the effect of any use necessarily extends beyond its borders. The use of one property is also a use of or demand upon other property. Sax, note 44, *supra*. at 152.

50. See note 32, *supra*.

51. A spillover results from the use of a common resource to which another landowner has an equal right. The incompatibility of these uses cannot be resolved by parceling out the resource in equal shares. For example, the owner of an air polluting factory demands the right to pollute the air while the adjacent residential property owner demands clean air. In this case, the demands upon a common resource arise from both sides. Sax, note 44, *supra* at 154, 161.

52. *Id*. at 159.

53. Regulations that protect the rights of diffuse interest holders do not "take" something the public never had before. Instead these regulations implicitly recognize a public interest in common and try to resolve these conflicting private and public claims. *Id*. at 172. This view is contrary to traditional taking law which assumes that the private property owner is the only party affected by government action. *Id*. at 154.

54. Compare Just v. Marinette County, 56 Wis. 2d 7, 201 N.W. 2d 761 (1972) (upholding wetland regulation) with Morris County Land Improvement Co. v. Township of Parsippany-Troy Hills, 40 N.J. 539, 193 A. 2d 232 (1963) (*contra*).

55. This theory narrows the taking issue to whether the regulation prohibits a landowner from making a use of his land that has no spillover effects. Compensation is due in this case. Sax, note 44, *supra.* at 164.

56. 115 N.H. 124, 336 A. 2d 239 (1975).

57. *Id.* at 126, 336 A. 2d at 240.

58. *Id.*

59. *Id.* at 127, 336 A. 2d at 243.

60. *Id.* at 129, 336 A. 2d at 242, citing, Richardson v. Beattie, 98 N.H. 71, 75-76, 95 A. 2d 122, 125 (1953).

The court further noted that:

> [T]he importance of wetlands to the public health and welfare would clearly sustain the denial of the permit . . . even were their rights the substantial property rights inherent in a current use of an activity on their land.

115 N.H. at 129, 336 A. 2d at 242. The court implicitly states that no consideration will be given to the loss of speculative profits arising from a future use. For further court consideration of lost future profits see Chevron Oil Co. v. Beaver County, 22 Utah 2d 143, 145, 449 P. 2d 989, 991 (1969), quoting, Dowse v. Salt Lake City Corp., 123 Utah 107, 100-11, 255 P. 2d 723, 724 (1953).

61. Wis. 2d 7, 201 N.W. 2d 761 (1972).

62. *Id.* at 16-17, 201 N.W. 2d at 767-78.

The court also recognized the competing rights of the diffused public and the individual landowner to use of a commons:

> [I]f the damage is such as to be suffered by many similarly situated and is in the nature of a restriction on the use to which land may be and ought to be borne by the individual as a member of society for the good of public safety . . . it is a reasonable exercise of the police power . . .

Id. at 15, 201 N.W. 2d at 767, citing, Stefan Auto Body v. State Highway Comm'n, 21 Wis. 2d 363, 369, 124 N.W. 2d 319, 323 (1963).

63. 300 A. 2d 736 (Me. 1973).

64. *Id.* at 748.

65. *Id.* at 750.

66. *Id.* at 751. The court noted that the failure to implement zoning restrictions may generate costs for the diffuse community interest for which no compensation is required. Thus, "the legislature has declared the public interest in preserving the environment from anything more than minimal destruction to be superior to the owner's rights in the use of his land. . ." *Id.*

67. Some balancing is allowed in the Maine case, since the harm to the environment must be unreasonable before a permit may be refused under Maine Law. *Id.* However, the factor of private loss in land value is not placed on an equal footing with the public purpose to be advanced by such a restriction. The loss in value factor merely remains as a guide to the legislature when considering the appropriateness of a land-use regulation. See F. Bosselman, D. Callies & J. Banta, The Taking Issue 662 (1973).

68. See text accompanying note 51, *supra.*

69. See note 64, *supra.*

70. This argument loses weight under the commons approach. The purpose of emission quota restrictions is to avoid the occurrence of a negative spillover -- deterioration of air quality -- by placing restrictions upon those producing these effects. In wetlands situations, it is important to deny development on land in order to avoid spillover effects on adjacent property. In air pollution cases it is also important to restrict the use of land to avoid spillover on adjacent property. The notion of the ambient air as a common good is recognized. See United States v. Causby, 328 U.S. 256, 261 (1946).

    In addition, it does not matter that the regulatory criteria used are not extensive with the resource to be protected. What is necessary is that use of the zoning power must advance the health, safety, morals or public welfare of the community. The environmental cases illustrate the legitimacy of clean air as an appropriate police power purpose.

71. A differential land use policy may be upheld if the legislative standards are clearly defined and reasonably related to the goals that are to be achieved.

72. 107 N.H. 523, 226 A. 2d 99 (1967).

73. The requirement that the rezoning be consistent with the plan and the surrounding area has been adopted by other courts. See *infra* note 81. "Once a [zoning scheme] is adopted, changes in it should be made only when such changes are consistent with the over-all objectives of the plan and in keeping with changes in the character of the area or neighborhood to be covered thereby." Smith v. Washington, 241 Or. 380, 384,

406 P. 2d 545, 547 (1965). See also Fasano v. Board of County Comm'rs, 264 Or. 574, 585, 507 P. 2d 21, 28 (1973); Baker v. City of Milwaukee, 271 Or. 500, 514, 533 P. 2d 772, 779 (1975); Duddles v. City Council of West Linn, 21 Or. App. 310, 318-22, 535 P. 2d 583, 588-89 (1975); Green v. Hayward, 275 Or. 693, 552 P. 2d 815, 823 (1976).

74. It is clear from the opinion that these two factors would uphold the municipality's refusal to rezone for industrial use. In fact, the Oregon Supreme Court placed heavy emphasis on the second factor by requiring that the party requesting the rezoning prove that the public need would best be met by changing the classification of the owner's property as opposed to using other available and appropriate zoned property. Fasano v. Board of County Comm'rs. 264 Or. 574, 585, 507 P. 2d 21, 29 (1973).

75. Green v. Hayward, 275 Or. 693, 553 P. 2d 815, 824 (1976). *See also* note 60, *supra*.

76. *See* note 73, *supra*. *See also*, e.g., Green v. County Planning & Zoning Comm'n., 340 A. 2d 852 (Del. Ch. 1974), *aff'd.*, 344 A. 2d 386 (Sup. Ct. 1975); Valenzia v. Zoning Bd., 270 Md. 478, 312 A. 2d 277 (1973; Fontaine v. Board of County Comm'rs., 493 P. 2d 670 (Colo. Ct. App. 1972); Schilling v. City of Midland, 38 Mich. App. 568, 196 N.W. 2d 846 (1972); Heran Holding Corp. v. City of Albany, 63 Misc. 2d 152, 311 N.Y.S. 2d 198 (Sup. Ct. 1970); Udell v. Haas, 21 N.Y. 2d 463, 235 N.E. 2d 897, 288 (1968). For a general discussion on the relationship between local comprehensive plans and the zoning process see Mandelker, The Role of the Local Comprehensive Plan in Land Use Regulation, 74 Mich. L. Rev. 899 (1976).

77. Duddles v. City Council of West Linn, 21 Or. App. 310, 535 P. 2d 583 (1975). Judicial reluctance to allow rezonings inconsistent with the plan is reflected in stringent standards of proof. In Fasano, the Court set out the requirements needed to sustain a rezoning:

> The more drastic the change, the greater will be the burden of showing . . . conformance with the plan . . . [and] a public need for the kind of change . . . If other areas have previously been designated for the particular type of development, it must be shown why it is necessary to introduce it into an area not previously contemplated and why the property owners there should bear the burden of departure.

Fasano v. Board of County Comm'rs., 264 Or. at 585, 507 P. 2d at 29.

78. Adajacent property owners attacking a rezoning will usually argue that the rezoning has improperly conferred a benefit on the property owner who has received the rezoning. The municipality must then defend against this assertion by relying on policy justifications indicating that the rezoning serves some overall community purpose.

79. See *supra* note 74.

80. 107 N.H. 523, 226 A. 2d 99 (1967).

81. Golden v. Planning Bd. of the Town of Ramapo, 30 N.Y. 2d 359, 285 N.E. 2d 291, 334 N.Y.S. 2d 138, appeal dism., 409 U.S. 1003 (1972).

82. *Id.* at 373, 285 N.E. 2d at 298, 334 N.Y.S. 2d at 147.

83. *Id.* at 382, 285 N.E. 2d at 304, 334 N.Y.S. 2d at 155.

84. See Collura v. Town of Arlington, 367 Mass. 881, 887, 329 N.E. 2d 733, 738 (1975); Steel Hill Dev. Co. v. Sanbornton, 469 F. 2d 956, 962 (1st Cir. 1972); State v. Snohomish County, 79 Wash. 2d 619, 488 P. 2d 511, 513-14 (1971); Rubin v. McAlevey, 54 Misc. 2d 338, 340-41, 282 N.Y.S. 2d 546 (Sup. Ct. 1967), *aff'd*, 29 App. Div. 2d, 288 N.Y.S. 2d 519 (1968); Compana v. Clark, 82 N.J. Super. 392, 397, 197 A. 2d 711, 714 (L. Div. 1964).

85. 30 N.Y. 2d at 380, 285 N.E. 2d at 304, 334 N.Y.S. 2d at 164.

86. A careful reading of this case seems to indicate that the court will facially distinguish interim ordinances, however substantial the nature and duration of the restrictions, from absolute prohibitions. *Id.* The court also stated that the landowner would be entitled to seek declaratory relief if the town transformed the restriction into a flat prohibition by failing to provide adequate facilities and services. *Id.* at 373 n. 7, 285 N.E. 2d at 298-299 n. 7, 334 N.Y.S. 2d at 148.

87. While the property owner may challenge the ordinance here claiming that a substantial diminution in the value of property is commensurate to a taking, the courts have rejected this argument. See text accompanying notes 16-37, *supra*. See also Sands Point Harbor Inc. v. Sullivan, 136 N.J. Super. 436, 346 A. 2d 612 (App. Div. 1975); Steel Hill Dev. Inc. v. Town of Sanbornton, 469 F. 2d 956 (1st Cir. 1972). In Krause v. City of Royal Oak, 11 Mich. App. 183, 160 N.W. 2d 769 (1968), the Supreme Court of Michigan noted: "[T]he mere fact that land may have a greater selling value for a possible use of different character than that for which it is zoned is not a sufficient basis for holding the ordinance invalid . . ." *Id.* at 190, 160 N.E. 2d at 772, citing, Smith v. Village of Wood Creek Farms, 371 Mich. 127, 133, 123 N.W. 2d 210, 213 (1963).

88. Note that municipal projections for industrial development will ordinarily have been computed when the emission quota is set. That is, the quota will allow a margin for industrial growth as long as the national air quality standards are not violated.

89. See text accompanying notes 74 and 44, *supra*.

90. Floating zones have been upheld as a valid land-use regulatory measure. See Beall v. Montgomery County Council, 240 Md. 77, 212 A. 2d 751 (1965); Rodgers v. Village of Tarrytown, 302 N.Y. 115, 96 N.E. 2d 731 (1951). In general see Mandelker, Delegation of Power and Function in Zoning Administration, 1963 Wash. U.L.Q. 60, 89-97. See also *supra* note 5.

91. In re Spring Valley Development, 300 A. 2d 736, 748 (Me. 1973).

92. [illegible]3 N.J. Super. 367, 247 A. 2d 350 (App. Div. 1968). *See also* 2 R. Anderson, American Law of Zoning § 9.11 (2d ed. 1976).

Other cases have also upheld the buffer strip concept without specifically considering its constitutionality as applied to the affected property. See, e.g., Hedrich v. Kane County, 117, Ill. App. 2d 169, 253 N.E. 2d 566 (1969).

Cf. Kozesnik v. Montgomery Tp., 24 N.J. 154, 131 A. 2d 1 (1957). The Gallop case is discussed in Quinton v. Edison Park Dev. Corp., 59 N.J. 571, 285 A. 2d 5 (1971).

93. *Id.* at 272, 247 A. 2d at 353.

94. *See* Note, Subdivision Land Dedications: Objectives and Objections, 27 Stan. L. Rev. 419 (1975).

95. Just what nexus must be proved between the service need generated by the subdivision and the dedication demanded from the developer has not yet been determined. For an expansive view of this requirement, see Associated Home Builders of Greater East Bay, Inc. v. City of Walnut Creek, 4 Cal. 3d 633, 484 P. 2d 606, 97 Cal. Rptr. 630, appeal dismissed, 404 U.S. 878 (1971). This case considered the constitutionality of a lot fee requirement, which is often imposed as an alternative to a land dedication. For a recent review of the case authority, see Comment, Subdivision Exactions: The Constitutional Issues, the Judicial Response, and the Pennsylvania Situation, 19 Vill. L. Rev. 782 (1974).

96. *See* East Neck Estates v. Luschinger, 61 Misc. 2d 619, 305 N.Y.S. 2d 922 (Sup. Ct.) (Trial court). The planning board required plaintiff to dedicate a portion of his shore front property as a condition to subdivision plat approval. The court invalidated the dedication because the strip of land was worth one-third of the total value of the property. *See also* Frank Ansuini v. City of Cranston, 107 R.I. 63, 264 A. 2d 910 (1970). The municipal ordinance required developers to dedicate seven per cent of their land for recreational purposes. This requirement was invalidated on the ground that the mandatory seven per cent dedication was arbitrary and could be unreasonable as applied to a particular development.

Local ordinances also commonly require that developers set their dwellings or buildings back a designated distance from a street or highway. Setback regulations have also been held unconstitutional when they deprive the landowner of an excessive amount of his land. *See, e.g.*, Zampieri v. Township of River Vale, 29 N.J. 599, 153 A. 2d 28 (1959).

97. *See* Mandelker, Planning the Freeway: Interim Controls in Highway Projects, 1964 Duke L.J. 439.

98. *See e.g.*, Grisor, S.A. v. City of New York, 83 Misc. 2d 1054, 374 N.Y.S. 2d 549 (Sup. Ct. 1975) (trial court), rev'd on other grounds. 54 App. Div. 2d 685, 387 N.Y.S. 2d 271 (1976).

99. *See* Jensen v. City of New York, 42 N.Y. 2d 1079, 369 N.E. 2d 1179, 399 N.Y.S. 2d 645 (1977).

100. *See e.g.*, Blevens v. City of Manchester, 103 N.H. 284, 170 A 2d 121 (1961) (subdivision control).

101. *See* text accompanying notes 18-27, *supra*.

102. *See* text accompanying notes 56-69, *supra*.

103. *See* text accompanying notes 82-86, *supra*.

104. Krasnowiecki, Legal Aspects of Planned Unit Development in Theory and Practice, in Frontiers of Planned Unit Development 99, 104 (R. Burchell ed. 1973).

105. Golden v. Planning Board of the Town of Ramapo, 30 N.Y. 2d 359, 285 N.E. 2d 291, 334 N.Y.S. 138, appeal dism., 409 U.S. 1003 (1972).

106. *Id.* at 378, 285 N.E. 2d at 302, 334 N.Y.S. 2d at 152.

107. *Id.* at 379, 285 N.E. 2d at 302, 334 N.Y.S. 2d at 152-153.

108. 259 N.W. 2d 553 (Iowa Ct. App. 1977) (rev. denied).

109. *Id.* at 554.

110. *Id.*

111. 6 Mich. App. 546, 149 N.W. 2d 899 (1967), rev'd, 381 Mich. 611, 166 N.W. 2d 453 (1969).

112. *Id.* at 612, 166 N.W. 2d at 453.

113. *Id.* at 617, 166 N.W. 2d at 456-57.

114. 375 F. Supp. 574 (N.D. Cal. 1974), rev'd, 522 F. 2d 897 (9th Cir. 1975). Cert. denied, 96 Sup. Ct. 1148 (1976).

115. *Id.* at 907.

116. *Id.* at 906 n. 11.

117. *Id.* See also Ybarra v. City of Town of Los Altos Hills, 503 F. 2d 250, 254 (9th Cir. 1974).

118. 522 F. 2d at 909 n. 17.

4 EMISSION QUOTA STRATEGIES AND THE STATES

4.1 THE ROLE OF THE STATES

The Clean Air Act creates a federal air pollution control program whose implementation depends on state and local government. The Act sets forth federal NAAQSs and procedures for reviewing and approving state air pollution control programs, but the federal effort is linked to state air quality planning, and can even be considered to be constrained by state actions. As discussed in Chapter 2, federal enforcement actions are limited in the absence of an approvable SIP or when a state is not implementing its program according to its own SIP. The EPA Administrator can only amend a SIP after extensive opportunities by the state to correct perceived deficiencies, and can only bring enforcement actions against violators of the federal standards and the SIP, and not against a state itself.[1]

The federal air pollution control program is essentially a collection of state air pollution control programs, all tied to administrative procedures and air quality standards established under the Clean Air Act. State and local governments are primarily responsible for implementation. To a large extent, EPA options for enforcement and implementation are even limited by state preemption--the Administrator's actions must be linked to existing SIPs.[2] Therefore, this chapter focuses on the state role in air pollution control, especially on the issues that arise when states consider emission quota strategies as part of their air pollution control programs.

States are the principal repositories of regulatory power in those areas of law or regulation not preempted by the Congress to the federal government. In those areas not expressly granted to the federal government--by the Constitution or by the Congress passing statutes pursuant to the Constitution--the states may exercise regulatory jurisdiction to promote the "health, safety, and general welfare" of their inhabitants. This grant of authority, known as the police power, defines states' ability to regulate pursuant to these objectives.[3]

Air pollution control is traditionally an area of state regulation. State air pollution control regulations predate the Clean Air Act and other federal legislation establishing a national interest in air quality management and emission control. Air pollution control is clearly associated with traditional authority of the police power, most notably the protection of public health and safety. This traditional exercise of authority is recognized by Congress within the Clean Air Act itself, where the Congressional findings state that "the prevention of air pollution at its source is the primary responsibility of States and local governments."[4]

This regulatory structure is important when considering potential state adoption of emission quota strategies as air pollution control techniques. Under this perspective, it is important to realize that the Clean Air Act and its provisions have only a minor impact on a state's ability to consider emission quota strategies under exercise of the police power. The Act establishes standards for both acceptable air quality (as set forth in the NAAQSs) and approvable state emission control plans to meet the requirements for AQMA planning and the SIPs. The Act does not "authorize" states to develop air pollution control regulations, because they already possess this authority as an inherent power. In essence, the states have the inherent authority to consider any number of techniques to control air pollution, including emission quota strategies. This authority is limited by the requirements for approvable SIPs under the Act and by constitutional constraints applying to state implementation of specific air pollution control regulations, topics discussed in greater detail in Chapters 2 and 3.

States' authority to exercise the police power resides in the state legislatures. The legislatures are responsible for allocating this power among the various state agencies and units of local and regional government created by specific state statutes. Such statutes are typically called enabling legislation, because they allow a unit of state or local government to undertake some activity in furtherance of the police power residing in the state legislature. Enabling legislation generally gives units of government specific jurisdiction and establishes procedures under which this jurisdiction can be exercised.

The legal issues concerning state implementation of EDZ and other emission quotas therefore involve specific exercises of the police power that can be administered by state and local government under enabling legislation. The two major questions arising from this structure and authority to regulate are:

1. Does state enabling legislation allow the use of emission quota strategies on the state and local levels?
2. If so, how can this authority be delegated among the various units of government authorized to exercise the police power under existing enabling legislation?

In order to answer these questions, the enabling legislation and administrative regulations of six states -- Alabama, Colorado, Illinois, Minnesota, New Jersey, and Pennsylvania -- were surveyed. These states represent a broad diversity of geographic areas and air quality programs, each reflecting air pollution and political issues unique to the state. The findings generated by this survey may be applicable to a larger number of states, especially when the broad legal issues that may arise through the use of emission quota strategies are considered. The specific findings of this survey, as well as the methodology and selection criteria used to identify and select the six states, are given in Appendix B. To a large extent, the following discussion is based on this survey.

Air pollution can be controlled on either the state or substate levels of government (or both). State enabling legislation can create an air pollution control program to be implemented by a state agency. The police power also can be delegated to local and regional agencies created by state enabling legislation or grants of authority under the state constitutions. Substate levels of government include local government units, such as counties, towns and townships, cities, and villages, as well as regional agencies consisting of a number of local governments acting in unison for specified purposes. They can also include special districts established by state law to service substate jurisdictions. Technically, under the principles of delegation of authority involving the police power, any or all of these governmental entities can be authorized to exercise air pollution controls within their political boundaries, and this authorization can involve considerations of emission quota strategies as air pollution techniques.

To explore this factor in greater detail, this chapter examines the authority and implementation of emission quota strategies on both the state and substate levels.

4.2 STATE IMPLEMENTATION OF EMISSION QUOTA STRATEGIES

All of the states surveyed (see Appendix B) delegate principal air pollution control authority to state government. State enabling legislation generally creates a state air pollution control agency and authorizes it to consider air pollution control standards and techniques to regulate all sources of air pollution within the state jurisdiction, consistent with state policies and objectives and with the objectives of relevant federal legislation, such as the Clean Air Act.[5]

The use of emission quotas as air pollution techniques must be consistent with the authority granted in the state enabling legislation. A question arises early in this consideration involving the nature of emission quota strategies. Are such techniques air pollution controls or land use controls? Although this issue appears facile at first impression, because emission quotas obviously pertain to both air pollution control and land-use management, the implications of administering these techniques on the state level are complex. Whether emission quotas are characterized as land-use controls or air pollution controls determines to a great extent the states' ability to administer and implement them.

If emission quotas are characterized as air pollution controls, they probably would be administered by the state agency given primary responsibility to control air pollution. Implementation of the emission quota strategies would then be guided by the procedures and authority established by the air pollution control enabling legislation and the administrative regulations adopted by the state air pollution control agency.

Emission quota strategies, principally emission density zoning, may also be considered as land-use controls.[6] In this case, principal administrative responsibility and regulatory authority to implement emission quotas may rest with the state agency responsible for state land-use control and management. Implementation would then be governed by the administrative procedures and legal guidelines contained within state land-use legislation. Emission quotas under the Clean Air Act and the constitutional issues that such techniques raise when perceived as land-use controls were discussed in Chapters 2 and 3.

Finally, emission quota strategies can be approached as a combination of air pollution and land-use control techniques, which, in essence, they are. Under this perspective, some state agency is principally responsible for administering and implementing these techniques; such implementation must, by necessity, involve coordination with other functional areas of state authority. States commonly create special-function agencies on the state level, and because the jurisdiction of such agencies is defined by their particular functions, coordination of techniques which fall under common jurisdiction becomes imperative.

From this last perspective, Section 4.2.3 examines how coordination can be achieved among state agencies given specific regulatory jurisdiction, using environmental policy legislation and other mechanisms. This discussion assumes that either a land-use control or air pollution control agency is given regulatory jurisdiction to use emission quotas, and the problem becomes one of assuring that program objectives under each agency's grant of jurisdiction are met through the use of emission quota techniques.

4.2.1 Emission Quota Strategies as State Air Pollution Controls

State legislation often gives one state agency, generally an air pollution control agency in a state board of health or department of environmental management, primary jurisdiction over air pollution control. The state air pollution control agency can exercise this authority directly, by issuing permits to persons wishing to undertake a development activity likely to affect air quality within the state, or indirectly, by decentralizing air quality planning and permits to substate agencies authorized to control air pollution within specific geographic areas (often defined by political boundaries, but occasionally consisting of an entire airshed sharing common problems of pollution).

State air pollution control agencies are generally given responsibility for four areas of activity by the state air pollution control enabling legislation. These are (1) monitoring air quality within the state or substate jurisdictions created by the state legislation, (2) issuing permits for development activities presumed to affect air quality within the state or substate jurisdictions, (3) enforcing state air pollution standards and permits issued to achieve those standards, and (4) administering the state air pollution control program, including the creation of state administrative procedures, regulations, and pollution standards to achieve the purposes of the state legislation. Each of these activities affects state options to consider emission quota techniques, and is therefore discussed in greater detail below.

Although state air pollution agencies may have jurisdiction over all sources of emissions, the state air pollution control program is centered around its permit authority. State permit programs involve the ability to enforce permit conditions and to prosecute violators of state emission standards and regulations promoted by such permits. The permit process is essentially passive; state authority is not exercised until an application is submitted. Generally, these permit applications are made by individuals proposing a development activity that the state presumes will affect air quality. State presumptions of air quality impact are very important, because the types of activities likely to meet this presumption are frequently listed within the state enabling legislation creating the air pollution control program, as well as within the agency's own administrative regulations. The legislation may specify that only certain commercial, industrial, or residential developments are presumed to affect air quality and require air pollution control permits. Such activities also can include the installation of air pollution abatement equipment, as well as the construction of equipment likely to create new pollution sources. But the definitions of activities presumed to affect air quality and which require air pollution control permits also often involve exclusions to state regulatory authority. Single-family dwellings, or small mutifamily dwellings, may occasionally be excluded from the requirement of a state air pollution control permit. The exclusions are largely for the sake of administrative convenience and recognize the limited resources of the agency that reviews and approves permit applications.[7]

Permit applications may be received directly from an applicant or from another state agency with different functional responsibilities under separate enabling legislation.[8] For example, the state air pollution control agency may receive an air pollution control permit application from a state land-use control agency, responsible for reviewing certain types of industrial development that also qualify as presumed sources of air pollution. The land-use agency may forward the application to the air pollution control agency, if it feels that development may require air pollution control approval in addition to land-use approvals. Similarly, the air pollution control agency may forward permit applications to other state agencies, if it feels that additional state approvals are necessary. An example of the latter situation would be the case where the installation of a smokestack scrubber would require a state air pollution control permit, and the air pollution agency recognizes that the use of this device could contaminate ground or surface waters. It might therefore forward the permit application to a state water quality management agency after it has reviewed the air quality considerations.

Permit applications received by the state air pollution control agency are reviewed according to state statutory standards and procedures established under state administrative regulations.[9] These standards and procedures are typically adopted to meet federal NAAQSs, and the procedures are reviewed by the U.S. EPA as part of its approval of a SIP or AQMA program; in some cases, however, states may adopt standards that are more restrictive than the federal standards. The permit review process generally includes at least one meeting with the applicant to discuss the project, its anticipated emissions, and how the emissions would affect state air quality standards. Emphasis is placed on developing manufacturing procedures or using pollution abatement equipment that will lessen potential emissions from the proposed source, thus maintaining air quality above the state standards and federal NAAQSs.

Many states have a "safety valve," incorporated into state statutes governing air pollution control, that allows construction of facilities or equipment which will result in violations of state pollution standards if the application of the state requirements will result in a substantial hardship for the applicant.[10] Pollution control requirements can be lessened or waived for certain projects where the imposition of state standards would adversely affect the economic viability of the project. This waiver can be granted administratively in some states by the agency or by a policy board given discretionary authority to hear appeals to state decisions regarding air pollution permits. However, the federal NAAQSs must be maintained.

State permits may be single-stage or multistage. A single-stage permit is a single approval given by the state air pollution control agency, allowing development to proceed as proposed on the application. A multistage permits process uses two or more permits to assure compliance with state standards and requirements.[11] For example, the state may issue a permit to install pollution abatement equipment or machinery likely to cause air pollution, and then require the issuance of a second permit once the equipment has been installed, but prior to its use. The second use permit is issued only if the technical requirements of the first installation permit have been met, and the use permit is generally valid for only a specified length of time. Upon its termination, the state will reinspect the facility and issue subsequent use permits if it finds that state air pollution standards are not being violated and will not be violated for the term of the use permit.

The state air pollution control agency is also responsible for enforcing the state air pollution standards.[12] Violations of emission standards may be identified during air pollution control permit inspections and from neighbors and local government officials notifying the agency of a potential violation. Violations may also be identified by the state agency's ongoing air quality monitoring program, where a particular air quality monitoring station may pick up pollutants in excess of anticipated levels, indicating a violation of emission standards.

Enforcement may be by administrative hearing, legal action, or both. In some states, Illinois for example, air pollution control officials can bring violators before an administrative board, where violations are adjudicated according to administrative procedures and law.[13] Appeals from the administrative board decisions are through the courts. In other states, the state attorney general will bring a legal action against a violator, requesting injunctive relief or monetary damages under the state pollution control act. Occasionally, actions may be brought before an administrative board or a court of law, depending on whether enforcement is instituted by the state air pollution control agency or the attorney general responding to a citizen complaint. The penalties for violating the state pollution statutes are set forth in the statutes themselves, and can include punitive damages and injunctive relief.

This procedure describes the state air pollution control programs identified in the state survey, and probably describes the types of state air pollution control program found in most states. The implications of these techniques and administrative processes for state implementation of emission quota strategies can now be discussed.

One potential limitation to the use of emission quotas in the process described above lies in the grant of administrative authority to a state air pollution control agency by state enabling legislation. Although legislation may give a state agency legal jurisdiction over all sources of air pollution, such legislation frequently limits agency requirements for preconstruction review and permitting. More importantly, the state legislation frequently excludes certain activities from state permit jurisdiction, as well as allowing economic hardship exemptions. The restriction of state permit authority over a specific range of activities has important consequences for state implementation of emission quotas strategies. If the emission quota is applied only to those activities requiring a state permit, the regulated activities may be severely restricted should unregulated activities consume most of the emission limit quotas for a particular location. This may raise the equal protection and substantive due process issues discussed in Chapter 3.

There are four ways that states can deal with this issue. One way would be to expand state permitting authority to include all potential sources of emissions that could affect an emission quota. This may not be possible for several reasons. If the state enabling statute specifically excludes certain activities from state jurisdiction, then these activities cannot be brought under state authority by administrative regulation; they would require a specific statutory amendment to bring them within an emission quota program. Or, the expansion of state administration to include a number of smaller sources of emissions under emission quota strategies could overload the administrative and fiscal capabilities of many state air pollution control programs. Such programs may be understaffed and underfunded to fully meet their present statutory obligations, let alone expanded permit activities under emission quota approaches. Finally, the expansion of state permit authority to smaller uses, such as single-family dwellings, can conflict with traditional delegations of authority to local governments to regulate such uses. The requirement of state permits for activities usually regulated on the local levels of government will certainly create political risks for a state attempting such a process. Although the administrative and political issues raised by this approach are technically not legal issues, they must be considered along with such legal issues when contemplating a state-implemented emission quota strategy.

A second way that states can deal with the administrative issue is to delegate preconstruction permit authority to substate political units for the administration of emission quota strategies. Such units of government usually issue permits for a wide variety of development activities; and the scope of local permit authority would certainly encompass EDZ and other emission quota jurisdictional requirements. This delegation issue is discussed in greater detail later in this chapter.

The third approach is to limit the application of the quota to those sources currently requiring permit review. With this administrative approach care must be taken when setting the emission quotas to account for emissions and growth by those sources not subject to the quota and permit review. The procedures for setting emission quotas presented in the *EDZ Guidebook* allow for excluding sources from the quota and account for growth and emissions from sources not controlled by the quota.

The fourth approach is to implement the emission quota strategy independently of the permitting activity. However, the administration of the quota strategy must avoid the potential pitfalls of overburdening an enforcement agency and creating legal problems through inappropriate treatment of sources that may be exempt from the quota.

A second possible limitation to state-implemented emission quotas is the method of establishing state emission standards. Such standards are frequently mandated by the enabling legislation that created the state air pollution control agency, although latitude is occasionally given to such agencies to adopt additional standards by administrative regulation. The state emission standards are usually phrased in terms of emission per unit time, and do not establish a unit area criterion for gauging emission limits. Emission quotas typically would be phrased in terms of emission per unit time per unit area. If the enabling legislation does not use a unit area factor, then the legal issue of delegation of authority may arise if the state air pollution control agency adopts a unit-area emission standard to meet the air quality standard.

Although state regulatory authority may be broadly construed by a court, its breadth would be constrained by specific enabling legislation.

Where a state legislature establishes very specific emission standards within the body of a statute, the specific standards would apply (especially when a state agency is not authorized to consider additional standards by the statute). If a state agency were to apply an emission standard, an emission per unit time per unit area requirement under EDZ, for example, there would be a certain legal risk. The risk would be that a court may find that the state air pollution control agency has exceeded its authority by the use of any standards other than those created by its enabling legislation. Such regulations may be voided as a violation of delegation of authority, but the chance of this occurring depends on prior legal precedent within the state courts and the ability of the state to present evidence showing the relationship of the emission standard to the air quality standard. This issue cannot be generalized to all states, but it must be recognized as a potential legal issue in some jurisdictions.

The traditional state-local separation of powers in zoning matters and the similarity of EDZ and locally-controlled land-use zoning probably make non-EDZ strategies more politically acceptable for state implementation.

Floating zone emission quotas (FZEQ) can operate within existing state permit authority. Radii based on technical and policy considerations could be developed by the state air pollution control agency. Overlapping radii and keeping track of the quota remaining around a given point in the state could be handled through alterations of existing source-monitoring procedures. In fact, FZEQ may currently be implementable by state air pollution agencies under their existing regulatory authority.[14]

Jurisdictional and district emission quotas (JEQ and DEQ) could operate under a system of state standards with local or regional agencies handling administration and enforcement. This could be done if the state regulatory authority could be delegated to local government (discussed further later in the chapter). The state and local programs could be meshed together to improve overall enforcement, especially in those cases where the state permits large sources and the localities or regional agencies permit smaller ones.

4.2.2 Emission Quota Strategies as State Land Use Controls

Emission quota strategies are intimately involved with land use as well as air pollution, and can therefore be considered as land-use controls as well as air pollution management techniques. In order for states to implement emission quotas as land-use controls pursuant to state land-use management enabling legislation, it is necessary that the state have a land-use control program in existence or consider establishing such a program.

Most states have no comprehensive state-wide land-use control program that can be used as a vehicle for implementation of emission quota strategies. In the majority of states, the authority to zone and regulate private property has been delegated to local government (or occasionally regional agencies) under zoning enabling legislation.[15] Land-use control then becomes a technique for local government and generally not within state jurisdiction or administered by a state level agency. As a result of this early delegation to local government, the exercise of land-use control by the state is often considered controversial and a usurpation of local perogatives, even though the police power itself resides principally in the state.

A few states, however, do exercise land-use authority over certain types of activities or certain geographic areas. This power to regulate is recaptured by the state for those areas or activities which the state legislature feels are inappropriate for local implementation.[16] The inappropriateness of local regulation is based on the size (or complexity) of the projects requiring state review or on the ecological fragility of the area which may undergo development. State recapture of the police power is rooted in the concept of state importance and the greater analytical resources available to state agencies, when compared to the resources (analytical and administrative) available on the local levels.

State land-use programs can be administered three ways: (1) the state can establish a program of direct regulation and permit review, similar to a state's air pollution control program; (2) the state land-use control agency can establish standards and criteria for projects requiring the application of such standards, and mandate that local governments regulate under their own police power authorization, consistent with such state standards and criteria; or (3) the state can recommend review standards for local governments considering certain kinds of projects or projects proposed in certain geographic areas, and allow local governments to regulate according to whether local government officials wish to apply the state criteria and standards, creating a discretionary state land-use program.

Direct state permit approvals and reviews are used by very few states. Vermont, for example, requires state review and permit approval for any proposal meeting state review criteria.[17] Such review is based on legislative standards contained within the enabling legislation. This same approach is followed in Maine.[18] In California[19] and New Jersey,[20] it applies only to projects proposed in the coastal zones, as defined by state enabling legislation. Coastal zone legislation exists in one of the sample states surveyed, and deserves greater attention as an example of how air pollution criteria can be accommodated within a state land-use program.

New Jersey established its Coastal Areas Facility Review Act (CAFRA) and created a Coastal Areas Facility Review Board responsible for appeals. Like the state air pollution control program, the CAFRA is administered by the state Department of Environmental Protection.[21] Also like the state air pollution control program, the CAFRA defines "facilities" requiring state review and permit approval and limits its jurisdiction only to a specific class of large-scale development projects thought to have a major impact on the state's investments, environment, or residents.[22] Unlike the state-wide pollution control act, the CAFRA limits its jurisdiction only to the non-urbanized coastline of the state, and not to the state as a whole.[23]

A person proposing a coastal zone facility requiring CAFRA review makes an application to the state, and presents information regarding the proposal.[24] The state then considers the information, holds a public hearing, and decides whether to issue a CAFRA permit according to statutory criteria and standards.[25] The state CAFRA approval can contain conditions to be imposed on the development.[26] The Act also provides that persons aggrieved by a CAFRA permit denial (or conditions imposed on an approved permit) can appeal to the Board, which is not in the Department of Environmental Protection, but consists of the commissioners (or their delegated representatives) of the Department of Environmental Protection, the Department of Labor and Industry, and the Department of Community Affairs.[27]

In reviewing an application for a CAFRA permit, the Department of Environmental Protection must issue a permit if it finds that certain standards have been met, as set forth in the Act. These findings include a determination by the commissioner that the facility: (1) conforms with all applicable air emission standards and effluent standards and all applicable air quality standards; (2) prevents air emissions in excess of the existing dilution, assimilative, and recovery capacities of the air at the site and within the surrounding region; and (3) satisfies other criteria related to environmental quality and the furtherance of the public health, safety and general welfare.[28] The Act also contains a broad criterion whereby a permit may be denied if it violates the purposes of the Act or if the commissioner finds "that the proposed facility would materially contribute to an already serious and unacceptable level of environmental degradation or resource exhaustion...," and the commissioner may issue conditions on any permit to protect the public safety and general welfare.[29]

The state land-use program also contains a requirement for a land-use plan, containing policies and objectives to be accomplished by the regulatory program, similar to the plan requirements for zoning by local governments. Under the CAFRA, the state must create a land-use plan for the coastal zone, after completing an inventory of coastal resources and limitations to development.[30] The state must conform to its own policies contained within the plan in administering permit activities under the Act.

A similar program with a slightly different structure is used in Florida, where a state plan is implemented by mandated criteria and standards administered by regional agencies.[31] This program differes from the CAFRA by the requirement that regional agencies must comply with state administrative standards and are responsible for both enforcing and administering the state program. Like the CAFRA, the Florida act creates state and regional jurisdiction only over certain classes of development activity (called developments of regional impact),[32] and over development occuring in environmentally fragile areas (called areas of critical planning concern).[33] The Florida act is based on model legislation created by the American Law Institute, called the Model Land Development Code.[34]

State-mandated regional regulation under the Florida approach creates a situation where appeals of the denial of, or conditions imposed on, state permit approvals are made to the state, and failing state approval, to the courts.[35] Enforcement of the program, however, is principally by local governments whose local permits must comply with the regional development approvals.[36] This structure has resulted in many conditions being unenforced by local government, hindering implementation of the state program. The program is hampered by inadequate manpower to monitor and enforce its provisions.[37] Like New Jersey's CAFRA program, the regional permit approvals made pursuant to the state standards include air quality considerations as well as a range of broader land-use issues.

A state land-use program using discretionary state development standards arises in Colorado under the Colorado Land-Use Act, which creates the Colorado Land-Use Commission (CLUC).[38] Under this program, the CLUC establishes criteria for various types of development activities which, because of their size or location, fall under the jurisdiction of the Act.[39] The CLUC also establishes standards for such classes of development, which must be applied to local permit reviews and approvals by substate units of government already authorized to regulate under standard zoning and subdivision review enabling legislation.[40]

The CLUC guidelines are only advisory for the local governments implementing the Act. A local government's failure to follow the state guidelines for activities of state interest, or for developments proposed in areas of state interest, can result in legal action by the state to compel compliance, but this legal action can only be undertaken with the approval of the Governor, and only after a local government has refused to remedy the situation. Therefore, the "mandate" established by the state program is extremely weak, and becomes more an advisory position creating administrative, rather than substantive, procedures.[41]

Emission quota strategies can generally be considered under these state land-use programs, but the efficacy with which they could be implemented will vary from program to program. Air quality considerations are one factor in state decision-making in all of the state land-use control programs surveyed, and thus jurisdiction to consider emission quotas and other techniques to abate air pollution is expressly authorized by the state enabling legislation creating these programs.

Implementation of emission quota strategies to control air pollution would involve many of the same legal issues as were discussed under state air pollution control administration. For example, the state land-use programs generally regulate certain classes of activity, and although these classes can be controlled by the permit review, there would be no state jurisdiction over other uses which could raise emissions above the emission quota. Second, unlike administration by a state air pollution control agency, the implementation of emission quota techniques by a state land-use agency might be restricted only to certain geographic areas of the state under programs involving direct state permits or mandated local permits under state development standards. New Jersey's CAFRA program, for example, would only regulate emissions within the designated coastal zone as defined by the Act, and would not give the state land-use agency jurisdiction over inland sources of emissions.

The legal issue involving the application of state standards for air pollution control is slightly different in a land-use context than in an air pollution control context. Generally, state land-use control agencies may have more flexibility than state air pollution control agencies to consider air quality standards other than those adopted in the SIP in order to meet Clean Air Act standards. Although the state land-use review criteria are based on adopted state air quality standards (which themselves are based on the NAAQS contained in the Clean Air Act, in many cases), the state land-use considerations involving air quality components in the regulatory process may be broader than the state air pollution control program's review criteria. Although the NAAQSs contained in the federal Clean Air Act can be considered minimum standards that must be met by the state in order to achieve an acceptable SIP, and states may have the authority to adopt more stringent standards, this authority is usually explicitly given in much of the state land-use legislation. State land-use control programs operate under different grant of authority from state legislatures than do state air pollution control programs, and there may be more flexibility for a state land-use program to consider innovative techniques of air pollution control, such as EDZ and other emission quota strategies. However, if the emission quota is necessary to meet or maintain federal NAAQSs, use of the emission quota as a land-use control (that is, not as part of the SIP) may result in the SIP not being approved by the U.S. EPA.

Consideration of EDZ within a land-use program, operating under a different grant of police power legislation than a state air pollution control program, may even circumvent some of the legal issues raised in Chapter 2, where such controls were analyzed under the CAA provisions and mandates. For example, review criteria under CAFRA authorize the state to consider the effect of dilution of emissions as part of its land-use decision making authority, and this criterion may be impermissible under a state air pollution control program as a result of the federal nondegradation policies as interpreted in the "smokestack" cases, discussed earlier.

Another legal issue that arises as a result of state EDZ implementation under land-use control authority lies in the interrelationship between land use and air quality planning. Most state land-use control program require a comprehensive development plan, and such plans often contain air quality objectives.[illegible] It is unknown whether such land-use plans are submitted to the U.S. Environmental Protection Agency as part of an SIP. State land-use plans tend to be integrated and organized documents, while the SIP required under the CAA tends to be a collection of authorizations, statutory programs, and standards that evidence compliance with federal objectives and standards.[illegible] Because air quality components of state land-use plans are implemented by the state land-use agency, it is possible that such land-use plans specifically contain provisions of the SIPs required under the CAA. Therefore, a project requiring both land-use agency and air pollution control agency approvals may fall under different standards within the individual plans, raising a substantive due process and equal protection issue. This issue was discussed in greater detail in Chapter 3, but must be recognized here as a result of planning fragmentation between the various single-function agencies exercising control on the state level.

The FZEQ, DEQ, and JEQ strategies may prove easier to administer on the state level than EDZ, depending on the type of state land-use control process in effect. State land control programs that reserve direct permit review to a specific state agency would face issues similar to those raised with respect to centralized state air pollution control administration. State land-use programs relying on state mandates to substate jurisdictions appear to establish an optimum administrative structure for DEQ and JEQ strategies. State programs, such as Colorado's, which are only advisory seem to offer less potential for these types of techniques. The mandatory aspects of local implementation of state land-use control standards can easily serve as the vehicle for imposing state air quality standards on local governments, via the DEQ or JEQ approaches. The issues that would be rasied by this type of mandatory program would be largely constitutional, as explored in Chapter 3, and not ones of delegation of authority, as examined in Section 4.3. Mandatory state land-use programs involving substate implementation explicitly establish a clear delegation of authority and leave little doubt as to the actions expected from local governments subject to such a mandate.

4.2.3 State Coordination of Emission Quota Strategies

As discussed in Sections 4.2.1 and 4.2.2, emission quota strategies can be considered both land-use and air quality controls, and can be implemented by state land-use and air pollution control agencies. Because land-use control programs use development standards based on state air pollution control standards, and a state air pollution control program must consider state land-use objectives when implementing an emission quota strategy, it becomes necessary to consider mechanisms for coordinating decision-making among the two functional areas of state regulation.

Air pollution control and land-use management objectives based on an emission quota approach can be reconciled through (1) a requirement within the enabling legislation of either program that state decision-making accommodate the objectives of the other program, (2) specific legislation mandating coordination among different state regulatory agencies, and (3) single-purpose regulatory programs accommodating the functional responsibilities of both air pollution control and land-use management.

The New Jersey CAFRA program is an exmple of a program that is legislatively mandated to consider functional standards of another state agency. The CAFRA explicitly establishes the state air quality standards as review criteria for the state land-use control program. Although the Act allows the state coastal facilities review section of the Department of Environmental Protection to consider other standards in addition to the state air quality standards if deemed appropriate to a particular development proposal, the state air quality standards are the essential minimum standards that must be met by the state coastal agency in reaching its land-use decisions regarding CAFRA permits. This functional coordination may be a result of the state's effort to comply with the Coastal Zone Management Act of 1972, in order to develop a coastal management program that will be eligible for further funding by the National Oceanic and Atmospheric Administration.[44] The Coastal Zone Management Act requires that state coastal zone management programs seeking funding incorporate requirements of the Clean Air Act.[45] The coordination within the CAFRA may be a result of this federal mandate.

Coordination among various functional areas of state regulation considering emission quotas may also be by special integrative legislation, predominantly state environmental policy acts. State environmental policy acts (SEPAs), modeled after the National Environmental Policy Act (NEPA), require the creation and circulation of an environmental impact statement (EIS) by any state agency proposing an action that will have a significant effect on the natural environment. An EIS must describe the proposed activity, discuss its impact on the environment, and examine alternatives to the action that can be considered (along with environmental impacts of each alternative considered in the EIS). The EIS is circulated for comment to other state agencies, which review the proposed action and suggest ways in which negative impacts can be ameliorated.

An EIS requirement under a SEPA is not technically a regulatory program. A state agency can implement an activity that will have a significant impact on the environment, provided that alternatives have been considered, impacts assessed, and the EIS circulated for comment according to the administrative procedures established under the state legislation. Because of the circulation and comment requirements, the effects of such programs are largely informational and coordinative. SEPAs are essentially disclosure programs, and the disclosure of proposed actions to other state agencies can operate as an implicit coordinative mechanism.

Among the states surveyed, both Minnesota[46] and New Jersey[47] have SEPAs. Because of the prevalence of these types of acts as state disclosure mechanisms, a closer examination of Minnesota's program is warranted, as an example of how these programs would affect emission quota strategies.

Minnesota is one of 18 states using SEPA legislation to require the preparation and circulation of EISs. The requirements of the Minnesota legislation are administered by the Minnesota Environmental Quality Council ("the Council"). The requirements are patterned after those of NEPA,[48] and are set forth below:

> Subdivision 1. Where there is potential for significant environmental effects resulting from any major governmental action or from any major private action of more than local

> significance, such action shall be preceded by a detailed statement prepared by the responsible agency or, where no governmental permit is required, by the responsible person, on:
>
> (a) The environmental impact of the proposed action, including any pollution, impairment, or destruction of the air, water, land, or other natural resources located within the state;
>
> (b) Any direct or indirect adverse environmental, economic, and employment effects that cannot be avoided should the proposal be implemented;
>
> (c) Alternatives to the proposed action;
>
> (d) The relationship between local short term uses of the environment and the maintenance and enhancement of long term productivity, including the environmental impact of predictable increased future development of an area because of the existence of a proposal, if approved;
>
> (e) Any irreversible and irretrievable commitments of resources which would be involved in the proposed action should it be implemented;
>
> (f) The impact on state government of any federal controls associated with proposed actions; and
>
> (g) The multistate responsibilities associated with proposed actions.

The Act then goes on to state that officials responsible for issuing permits for natural resource management and development are to give due consideration to the possible environmental effects, even though the Council does not require an EIS for that permit.[49] The provisions of the Act also set notice requirements, recite state declarations of environmental policy, outline how costs are apportioned for the preparation of an EIS, and require the Governor to submit to the legislature an annual environmental quality report, similar to the annual report that Congress requires of the federal Council on Environmental Quality.[50] The Minnesota statute is one of the strongest in the nation in that it provides for an administrative agency with powers to promulgate rules and regulations, convene public hearings, and require the redrafting of inadequate EISs.

Although it seems that the Council could, without question, require the preparation of an EIS if a state agency should consider an emission quota strategy, Council rules may modify this certainty somewhat, leaving it a discretionary rather than a mandatory decision. If an EIS is required for permits that would result in significant air pollution, it is unclear whether such a requirement would be imposed on an activity, such as the implementation of an emission quota strategy, whose effects are beneficial rather than detrimental to the environment. It appears that the Council could request a statement describing the expected benefits to be gained by the use of a new air pollution control strategy; however the rules of the Council are aimed at precluding or minimizing effects resulting from activities that are known to be environmentally harmful rather than beneficial. The Council may have the authority to exclude beneficial activities, such as the imposition of emission quota strategies to control air pollution, under its own rules, precluding the preparation of an environmental assessment worksheet or EIS. Thus, if the Council should decide on such an exclusion, coordination between the various state agencies considering emission quotas would not be affected by the SEPA mandate.

The final coordinative mechanism affecting emission quota strategies is the use of special-purpose land-use management programs that incorporate air quality considerations as part of the permit process. An example of such legislation would be the power plant siting statutes in effect in a number of states, where a proposed electrical generating plant would be comprehensively reviewed by a special state agency (or by an agency already given air pollution control or land-use control authority under existing legislation).[51] This type of legislation is focused on an emission source, rather than on a range of development activities, and can be considered as a special type of land-use control on the state level. This type of legislation exists in Minnesota and in New Jersey's CAFRA[52] (a description of the Minnesota program is given in Appendix B).

As a result of its focus on a particular source of emissions, the power plant siting legislation appears especially appropriate for the FZEQ strategies. The power plant stack heights and anticipated emission levels can provide a basis for computing future emission levels and a comparison with computer-generated emission limits within a designated "zone" around the proposed facility. The FZEQ technique is particularly appropriate when the state is dealing with a single known source of emissions, such as a power plant.

Because power plant operators may be required to conduct detailed air quality analyses prior to construction, it may be appropriate to exclude power plants from an emission quota regulation. In this case, care must be taken to account for expected power plant emissions when estimating the quota for other sources. Otherwise the quota may have to be updated whenever a power plant is sited and may suffer from due process or equal protection problems similar to those that could arise if the quota strategy is improperly coordinated with permitting activities.

4.3 SUBSTATE IMPLEMENTATION OF EMISSION QUOTA STRATEGIES

Emission quota strategies can be implemented by substate jurisdictions--regional agencies and local governments--as well as by states. However, substate governments derive their authority to control private property (and emissions arising from the use of such property) from the state. This regulatory authority under the police power must be specifically delegated to substate governments. There are two legal mechanisms for doing this: by special state enabling legislation for a functional area of land-use control, or by general grants of authority for communities to consider regulations applicable to meeting local issues, under constitutional provision or general enabling legislation. This last delegation is known as "home rule," and represents a broad, rather than a narrow, grant of police power to certain classes or communities, pursuant to the adoption of a charter by the local government. The legal issues raised by both with respect to emission quota strategies are discussed below.

4.3.1 Home Rule and Emission Quota Strategies

Specific enabling legislation has been supplemented by home rule provisions in at least 34 states.[53] Home rule typically allows communities with certain characteristics to handle strictly local matters--e.g., fire and police protection--but specifically not those activities that will have an influence beyond the borders of the community. Home rule is a legal mechanism for dividing regulatory authority among the various levels of government,[54] and should not be confused with popular interpretations of this authority as a political device giving supremacy to local governments, although this authority has been construed in some states to be broader than the authority provided by enabling legislation.[55]

Home rule only applies to specific classes of communities, e.g., first class cities or townships. Therefore, regional agencies, for example, would not be authorized under home rule to exercise regulatory authority, although a city or town within a substate region may exercise authority under this grant of authority. Typically, communities exercising authority under home rule must do so pursuant to a municipal charter, which acts as a "mini-constitution" to constrain the exercise of such authority.

Emission quota strategies raise certain legal issues if exercised under home rule provisions, instead of under specific enabling legislation dealing with air quality management or land-use control. First, air pollution is recognized in the CAA as a responsibility of the states and an issue of national concern. Because of these aspects of national interest and concern, it seems unlikely that a community can characterize emission quotas and air pollution control as matters solely of "local concern." Air pollution is clearly not constrained by political boundaries--an aspect of pollution control that seems to mitigate against an approach rooted in home rule authority.

Second, some courts have narrowly interpreted the exercise of home rule authority to preclude activities by local governments that are already authorized by specific enabling legislation. In some states, where enabling legislation exists which authorizes the use of land-use or air pollution control techniques broad enough to include emission quota strategies, courts may consider these specific legislative authorizations to rule municipal actions, and not the broad grants of authority conferred by home rule provisions.

These two issues suggest that emission quotas might best be implemented by specific enabling legislation, rather than by broad home rule authorities. The implications of enabling legislation authority to use these air pollution and land-use control techniques are discussed below.

4.3.2 State Enabling Legislation and Emission Quota Strategies

Like the state, a local government can implement emission quotas through state enabling legislation. Two types of enabling legislation appear appropriate to authorize local and regional agencies to use emission quota strategies--land-use enabling legislation, and provisions in state air pollution control acts allowing the delegation of air pollution control authority to substate units of government by the state agency primarily responsible for administering the state air pollution control act.

State land-use enabling legislation would certainly be broad enough to allow local governments to consider emission quotas. All states have adopted a variant of the Standard State Zoning Enabling Act, which gives the police power to regulate land-uses to local governments under zoning.[56] This grant of authority explicitly states that communities may zone for the "purpose of promoting health, safety, morals, or the general welfare of the community."[57] Air quality considerations are therefore within the area of local interest in furthering the public health. Generally, in using zoning, a community's regulations must further the public interest in a reasonable way (i.e., not be arbitrary or capricious), and not result in an undue restriction on the uses of zoned property. These issues are resolved on a case-by-case basis and were discussed extensively in Chapter 3.

Except in rare circumstances, regional agencies and councils of government are not given regulatory authority by state land-use enabling legislation. The principal purpose of such authorities is to coordinate functional planning among the local governments in the region and provide technical assistance to these local governments.[58] Regional agencies may also undertake certain federally mandated tasks, such as review of federal grant proposals under the review process created by Circular A-95 of the federal Office of Management and Budget for actions affecting the region.

There are exceptions to this general trend, however. Florida's Land and Water Management Act of 1972 creates a strong role for regional agencies as part of the state land-use management program, and California's Coastal Management Act divides the coastline of the state into regions with regulatory authority. State law may also create special-function regional regulatory authorities, such as New Jersey's Hackensack-Meadowland Commission,[59] California and Nevada's Tahoe Regional Commission,[60] and New York's Adirondack Park Agency,[61] all authorized to function as both regional agencies and regulatory commissions. These may be considered more as state agencies with substate jurisdiction than regional agencies exercising independent regulatory authority, however.

The use of emission quota strategies by local and regional agencies as part of a land-use control program authorized by state zoning enabling legislation raises an important nonconsitutional legal issue. Generally, there is little coordination between local and state air quality objectives and planning.[62] Local governments, for the most part, exercise their zoning authority autonomously and generally regulate according to local needs and desires, as expressed in local development plans. Because air pollution may be an area-wide problem, there is the possibility that a local air pollution strategy using emission quotas may not be coordinated with neighboring communities, and therefore have little effect on the total air pollution of the airshed or district in which the community lies.

Coordination is supposedly under the authority of the regional agencies, but such agencies typically lack sufficient authority to provide more than advisory services to local governments.[63] Therefore, one may anticipate only limited coordination arising from regional development plans, because of a lack of mandate inherent in such planning. Coordination may also be assisted by those few state programs that require planning consistency, but state plan criteria often are so general so as not to provide the specific standards necessary to coordinate emission limits for neighboring communities.[64]

State air pollution control laws also typically contain provisions allowing the state agency given principal responsibility under the law to delegate its regulatory authority to local and regional agencies.[65] Delegation of authority under state air pollution control acts may be more appropriate for emission quota implementation than delegation under a land-use enabling statute directed specifically to local levels of government. Also under state air pollution control delegations, regional agencies are typically given a stronger role in air quality management than under the land-use enabling legislation.

State air pollution control laws allow the state to approve local air quality management programs and delegate state regulatory authority to substate levels of government. There is an implicit mandate in such a delegation, provided that coordination exists between state and substate air pollution control programs. If a local program is not being implemented according to state standards, then the state may technically revoke its approval of the local program and preempt local regulations in air quality control.

An applicant for a proposed emission source in a jurisdiction with an inadequate and preempted local air pollution control program may be required to meet the standards of the local air pollution control ordinance review as well as the requirements of a pre-construction permit under state standards and review procedures. This situation arises where a community bases its air pollution control program on authority contained within broad enabling legislation (such as zoning authority) but still wishes to have such a program authorized under a state air pollution control act provision. The revocation of the local program does not remove local authority to regulate, because the authority would flow from a different statutory source than the air pollution control act. Inconsistent standards on the state and local levels can raise constitutional violations of substantive due process, leaving the local program open to legal challenge.[66]

A state-approved program under an air pollution act provision may also raise legal issues involving state jurisdiction to approve such a local program. For example, EDZ or another emission quota strategy can be considered a land-use control and not an air pollution control under state air pollution control legislation, thus leaving the state air pollution control agency in a position of approving a set of regulations (i.e., land-use regulations) which it has no authority to consider under its own enabling legislation. Land-use enabling legislation may raise certain state review considerations (such as approval by a state's attorney general)[67] and an approval required by a state air pollution control agency may be in conflict with established review procedures under the land-use enabling act. An interview with an air pollution control official in New Jersey, for example, raised the issue that the state air pollution control agency might not approve, or feel that it has the authority to approve, an EDZ or other emission quota technique because it only has authority to consider air pollution control techniques and not land-use control techniques.

Finally, an issue similar to the one raised with respect to land-use controls may also appear with any of the emission quota approaches--a lack of coordination between state and substate implementation and planning. The correction of this deficiency may require establishment of new review and delegation procedures among the various levels of government in order to accommodate the close coordination that an emission quota strategy would require, especially a FZEQ or DEQ technique that could be applicable across municipal boundaries.[68]

4.4 FOOTNOTES

1. See the extensive discussion of these issues in Appendix A, *infra*.

2. 42 U.S.C. §7413 (1977 Supp.)

3. N. Williams. 1 American Land Planning Law §7.02 (Callaghan & Co., Chicago. 1974). Hereinafter cited as Land Planning Law.

4. 42 U.S.C. §7401(a)(3).

5. *See e.g.*, Colo. Rev. Stat. §25-7-102.

6. Hagevik, Mandelker, Brail. Air Quality Management and Land-Use Planning. (Praeger, NY. 1974). pp. 10-17.

7. Colo. Rev. Stat. §25-7-112; N.J. Rev. Stat. title 26 §9.2(a).

8. According to interviews with air pollution control officials in the sample states, most interagency coordination involving air pollution control permits is informal and not mandated by specific statutory provisions of the state air pollution control acts.

9. *E.g.*, Ill. Ann. Stat. 1939(a) (Smith-Hurd).

10. Colo. Rev. Stat. §25-7-115(2).

11. N.J. Stat. Ann. title 26 §8; PA. Cons. Stat. title 35 §4006.1.

12. *Id.* 14.

13. Ill. Ann. Stat. §1039.

14. Ill. Air Pollution Control Rules and Regulations. Rule 203(e)(5) and Rule 204(e). These already establish procedures for implementing a variant of an FZEQ strategy. The radius established for the zone is a one-mile radius from the center of such source(s). The rules apply to fuel combustion sources and sulfur oxide standards under the Act. In addition, the quota only applies to facilities owned by a single individual or firm within the one-mile radius.

15. The basic enabling legislation adopted by most states at one time or another is the U.S. Department of Commerce, A Standard State Zoning Enabling Act (1926).

16. *See*, David Hoeh. *An Introduction to a Flow-Through System of Land-Use Controls*. Unpublished paper presented at AIP National Conference. Denver, CO, Oct. 27-30, 1974.

17. Vt. Stat. Ann. title 10, § 6001-91 (1973), as amended (Supp. 1975); discussed in Mandelker, Environmental and Land-Use Controls Legislation (Bobbs-Merrill, 1976). pp. 323-392. Hereinafter cited as Land-Use Controls.

18. Me. Rev. Stat. title 38 § 481-489 (1973).

19. Cal. Public Resources Code § 2700 *et seq.* (West).

20. N.J. Stat. Ann. title 13 § 19-1 *et seq.* (1973).

21. *Id.* § 13:19-3.

22. *Id.*

23. *Id.* § 13:19-4.

24. *Id.* § 13:19-5.

25. *Id.* § 13:19-10.

26. *Id.* § 13:19-11

27. *Id.* § 13:19-13

28. *Id.* § 13:10-10(a) and (b).

29. *Id.* § 13:19-11

30. *Id.* § 13:19-16

31. Fla. Stat. ch. 380, The Florida Land and Water Management Act of 1972. *See*, also, Land Planning Law 160.15.

32. *Id.* § 380.06

33. *Id.* § 380.05

34. American Law Institute. A Model Land Development Code (1976).

35. Fla. Stat. § 380.06.

36. *Id.*

37. Stepanchak. The DRI Process: A Study of Local Government Response in Broward County. (FIU/FAU Joint Center for Environmental and Urban Problems, Ft. Lauderdale. March, 1976).

38. Colo. Rev. Stat. title 34 § 70-101 *et seq.* *See*, also, Land Use Controls, pp. 117-122.

39. *Id.* title 24 § 65.1-102.

40. *Id.*

41. *Op cit.*, Land-Use Controls, p. 122.

42. Land-Use Controls, Ch. VI.

43. *Id.*

44. Land-Use Controls, Ch. VI.

45. *Id.* p. 252-54.

46. N.J. Stat. Ann. title 27:23-23.3 *et seq;* N.J. Executive Order No. 53.

47. Minn. Stat. Ann. 166D.04 (1977).

48. 42 U.S.C. § 4321 *et seq.* (1970). The Supreme Court of Minnesota has adopted a test for adequacy of environmental impact statements that conforms with the stringent tests used by federal courts in reviewing impact statements prepared under NEPA.

> The purpose of all environmental legislation, at both state and federal levels, is to force agencies to make their own impartial evaluation of environmental considerations before reaching their decision. The agency's role in the preparation of an EIS is not to serve as an arbiter between two opposing parties, as a judge is to do in an adversary process. Instead, it is expected to be a source of independent expertise whose scientific investigation can uncover the data necessary to make an informed environmental decision. No Power Line v. Minnesota Environmental Quality Council, 262 N.W. 2d 312 at 327 (1977).

49. Minn. Stat. Ann. § 166D.04, para. 2.

50. *Id.* para. 7.

51. Baram, Michael S. *Environmental Law and the Siting of Facilities.* (Ballinger, Cambridge, Mass.) 1976.

52. N.J. Stat. Ann. title 13 § 19-11.

53. E. Strauss & J. Kusler, *Statutory Land-Use Control Enabling Authority in the 50 States* (1977).

54. T. Sandalow. *The Limits of Municipal Power Under Home Rule: A Role for the Courts,* 48 Minn. L. Rev. 643 (1964).

55. R. Anderson. American Law of Zoning, § 2.16 (2d ed. 1968); D. Mandelker and D. Netsch, State and Local Government in the Federal System, pp. 186-188 (1977).

56. 1 Land Planning Law § 1801 (1974).

57. *Id.*

58. E.g., Ill. Ann. Stat. Ch. 85 § 1101 *et seq.* § d1152 *et seq.*

59. 5 Land Planning Law § 160.10.

60. *Id.*

61. *Id.*

62. U.S. Environmental Protection Agency. *Interagency Cooperation in Comprehensive Urban Planning and Air Quality Maintenance.* (U.S. EPA, Washington. 1974) EPA-450/3-74-027.

63. Council of State Governments. 1 *Land-Use Policy and Program Analysis: Intergovernmental Relations in State Land-Use Planning.* (CSG, Lexington, KY. 1974).

64. D. Mandelker and L. Susskind. *Debate: Should Local Planning be Mandatory?* 44 Planning 14-22 (July, 1978).

65. *See, e.g.,* Ill. State. Ann. § 1046; Colo. Rev. Stat. § 25-7-125.

66. This issue already has been adjudicated by the Appellate Court of Illinois [intermediate court] in *Village of Union n. Southern California Chemical Co.,* 375 N.E. 2d 489 (1978). The court found that local air pollution control regulations within the village's zoning ordinance were preempted by state air quality standards, contained within the Illinois Environmental Protection Act of 1970.

67. As is the case with zoning under Massachusetts' zoning enabling act Mass. Gen. Laws ch. 40A.

68. *See* Note 62, *supra.*

5 CONCLUSIONS

5.1 THE CLEAN AIR ACT AND EMISSION QUOTA STRATEGIES

The national clean air legislation enacted in 1970 provided a relatively simple and clearcut statutory basis for the use of emission quotas. State implementation plan and pollution source control requirements were generally stated, and the U.S. EPA's unrestricted authority to mandate land-use controls provided a statutory basis for including emission quotas in state plans.

This relatively uncomplicated statutory framework for air pollution control has been considerably changed by the 1977 amendments, with the result that the statutory basis for emission quotas is no longer clear. EPA's authority to require land-use controls in state implementation plans has been withdrawn. Emission quotas may possibly be required for state implementation plans as a method for carrying out the preconstruction review of new sources of pollution, and the states remain free to adopt emission quotas voluntarily as part of their implementation plan strategy.

Detailed statutory implementation plan requirements have been provided for nonattainment areas and for areas in which the prevention of significant deterioration provisions apply. These requirements do not foreclose the adoption of emission quotas in state implementation plans, but statutory provisions for attainment of the National Ambient Air Quality Standards and for preconstruction source review create complications for the use of emission quotas in these areas. One problem is that emission quotas may have to be revised over time to comply with statutory requirements. By way of contrast, little in the way of specific statutory guidance is provided for the Air Quality Maintenance Plans that are required for Air Quality Maintenance Areas. In these areas, EPA regulations appear to allow the adoption of an emission quota as a method of maintaining the national air quality standards, but emission quotas are not explicitly required.

Careful attention will have to be given to the statutory requirements if emission quotas are to be useful as an air pollution control strategy. This review of the statute also suggests that the emission quota can be most easily adapted as a measure for maintaining air quality standards in those areas in which air quality maintenance planning is necessary.

A major legal issue involving federal policy under the Clean Air Act arises if emission quota strategies are considered pollution dispersion techniques, rather than pollution abatement strategies. The nondegradation policy of the Act has been affirmed in several circuits, and the application of emission quotas may conflict with this policy determination by the courts. If this conflict arises, then the use of emission quota strategies may be constrained by the courts as being contrary to the Act.

5.2 CONSTITUTIONAL ISSUES OF EMISSION QUOTA STRATEGIES

The implementation of air quality control programs to achieve National Ambient Air Quality Standards has important effects on urban growth and development patterns. Not the least of these is the impact that compliance with the national standards will have on new sources of industrial pollutants. EDZ is attractive because it converts the air quality requirements of the national standards into an emission control linked directly with land use. It thus provides a bridge between the controls over new sources of pollution that are traditional in air pollution control programs and the conventional zoning controls that are used to determine the location of industrial uses.

This report has considered the constitutional problems likely to be presented by EDZ and, more generally, emission quotas. These problems arise because emission quotas may impose a limit on development. Due process problems may then arise if industrial development is prohibited under the quota on a site on which that development would be allowable under the zoning ordinance. If no other development can reasonably be allowed on the site, a confiscation of land amounting to a taking in violation of the due process clause will have occurred. Equal protection problems arise from the manner in which the emission quota is administered. Development may or may not be allowed under the quota depending on the time at which approval is requested. Time-based allocations of the right to develop land may violate equal protection if time cannot be accepted as a fair basis on which development rights can be determined.

At least until recently, conventional zoning and land-use controls did not present quota problems. All land made available under a zoning ordinance for industrial use could be used for that purpose, and earlier approvals for industrial development did not foreclose approval of later industrial projects.

Recent decisions examining the constitutionality of local growth management programs, and the constitutionality of restrictive land-use controls adopted to achieve environmental objectives, have now provided some insight on how courts would view development quotas imposed under emission quota strategies.

Judicial support is available for the constitutionality of emission quota limitations on industrial use at least for the emission quota strategies that also depend on governmental allocation of development opportunities. Problems will arise as the quota runs out, at which time a prohibition on land use under the quota may present due process taking problems. These problems can be serious, but it should be remembered that they have an end-of-the-line quality. Careful correlation of the quota with local zoning can avoid due process objections in many instances. When these objections cannot be avoided, a program of compensation to the restricted landowner will avoid constitutional threats to the administration of the quota. Occasions for providing compensation will most likely be limited. Compensation to restricted landowners can thus provide a helpful backup to the administration of emission quotas which, in the usual case, will not provide due process objections.

Other problems are presented by emission density zoning, which may require land assembly by the affected industrial developer in order to comply with the quota if emissions cannot be reduced. If land assembly requirements are excessive, or if the land assembly needed to satisfy the quota is not possible, due process objections may be sustained. Once more, these objections may arise only in extreme cases. Developers who cannot comply with emission density zoning in highly developed industrial areas can seek sites in less developed areas in which the land assembly necessary to comply with the quota will be less difficult, or can install pollution-control equipment to reduce emissions. These strategies may lead to a dispersal of industrial development or the installation of additional pollution-abatement equipment in order to achieve air quality goals. Careful planning that takes air quality factors into account may also be able to avoid a dispersed industrial development pattern that may conflict with comprehensive planning goals.

Emission quotas are simply one example of a land-use control that imposes heightened restrictions on the use of land to achieve environmental objectives. Like other land-use controls with similar objectives, the emission quota raises new and vexing constitutional problems. The developing law in the land-use controls does not yet provide all of the answers to these problems, but it does suggest that careful implementation of an emission quota strategy can escape constitutional challenge except in the extreme cases.

5.3 STATE IMPLEMENTATION OF EMISSION QUOTA STRATEGIES

Emission quotas can be implemented either as a state air pollution control technique or as part of a state land-use management program. State air pollution control programs are authorized by state enabling legislation and are the principal responsibility of the states under the regulatory framework established by the federal Clean Air Act. Direct implementation of emission quotas as a state air pollution control technique may favor non-EDZ emission quota strategies. Delegation of police power authority to substate political jurisdictions allows sufficient flexibility to regional and local governments to accommodate smaller emission sources within their own regulatory jurisdiction, as well as allowing such units of government to adopt and implement standards that may be more stringent than those set forth for the state by the enabling legislation.

Similar issues arise when EDZ is implemented as part of a state land-use management program. Although the authority granted by state land-use planning and management programs is generally broad enough to allow a state land-use control agency to exercise jurisdiction over an EDZ strategy, the use of this approach is limited by the small number of states retaining direct regulatory jurisdiction over land-use issues. In a majority of states, the police power grant of authority to regulate and zone private property is delegated to local governments. However, in those states with special-purpose land-use management programs (whether statewide, or restricted to a specific area, such as a coastal zone), EDZ and other emission quota strategies would be permissible. The major issues which arise in this situation are those regarding the state air pollution control program approach--i.e., the limited permit authority of such agencies and the basic reliance on state air quality standards, as expressed in state air pollution control legislation.

The state may also consider ways in which land use considerations and air pollution control objectives can be integrated. These involve mandatory coordination within the state land-use or air pollution control enabling legislation, as well as special coordinative legislation, such as environmental policy acts modeled after NEPA. Special purpose legislation, such as power plant siting statutes, also provide coordinative benefits, but are limited in their scope to a single source of emissions.

Regional and local governments also may be granted jurisdiction over emission sources and authorized to consider emission quota strategies by state enabling legislation. Such grants of enabling authority may be given in either state air pollution control or land-use management legislation, or granted independently through state zoning enabling statutes. Regional governments are usually granted technical assistance authority under land-use enabling legislation, and may play a larger role in implementing EDZ and other emission quota strategies under delegations of authority contained within state air pollution control legislation. Regardless of whether police power grants are under land-use or air pollution control statutes, a major impediment to local implementation of emission quota strategies lies in a general lack of coordination between local and state air quality management.

5.4 IMPLICATIONS FOR MODEL STATE LEGISLATION AUTHORIZING EMISSION QUOTAS

States may consider specific legislation to allow or promote the use of emission quota strategies and to solve many of the constitutional and administrative problems discussed in this report. Such legislative amendments can be phrased either as a state air pollution control program or within the framework of an existing land-use control statute. Emission quota strategies can also be considered within independent legislation, coordinating state land-use and air quality decisions involving such techniques.

Modifications of state air pollution control legislation to accommodate emission quota strategies may affect the permit authority given to state air pollution control agencies. The state legislation may also have to be amended to expand notice requirements to persons regulated under an emission quota strategy, so as not to abridge procedural due process.

The time-consuming and unwieldy system of technical hearings and administrative appeals in some states may be inappropriate to handle the increased workload which an extension of permitting jurisdiction would entail. This would suggest that legislative efforts be directed to modifying the delegation of authority provisions in such state statutes by including specific administrative guidelines to substate jurisdictions considering these strategies, stream-lining permit procedures while maintaining maximum public involvement and participation. Therefore, modifications of administrative standards may have to be considered.

State land-use control programs may have to be modified in similar manners. State land-use review criteria are often broader than air pollution decisions made by state air pollution control agencies, and encompass a greater number of considerations than air quality itself. In a few coastal zone management programs, state air quality standards also become a criterion for state land-use review. This coordinative aspect might need to be strengthened when considering emission quota strategies. Coordination between air pollution and land-use management agencies is largely informal, and more formal links between the two programs may have to be created in order for a state to implement EDZ and other emission quota strategies.

Implementation by local and regional agencies may require modification of state land-use control enabling legislation. The coordination of functional air quality planning on the state and substate levels may have to be strengthened, and emission quotas established by such substate plans may have to be integrated into the statewide air quality planning necessary under the Clean Air Act. Because local governments derive zoning authority under independent zoning enabling legislation, the implementation of an EDZ strategy might be best accomplished through state air pollution control enabling legislation, rather than through state land-use control legislation. Integration with state land-use management programs sounds appealing, but the number of such programs in existence, and their limited jurisdiction over certain activities and geographic areas, may limit the use of such statutes as vehicles for local and regional authorizations necessary to implement EDZ.

Further research should be undertaken, stressing local and state cooperation in air quality planning and control, before major changes in state enabling legislation are considered. Using special-purpose legislation to authorize EDZ, instead of modifying existing statutes governing air pollution control and land-use management by the state, should also be explored in greater detail. There is an emerging interest on the state level in "one-stop permitting," using comprehensive regulatory structures to authorize development activities; the implications of this approach for EDZ and other emission quota strategies deserve further examination.

APPENDIX A

Provisions of the Clean Air Act and Their Implementation

Congress enacted the Clean Air Act "to protect and enhance the quality of the Nation's air resources so as to promote the public health and welfare and the productive capacity of its population."[1] Federal financial assistance and leadership were to be committed for this purpose, but the states and local governments were to assume primary responsibility for preventing and controlling air pollution.[2] Thus the states were empowered to negotiate and form agreements "for cooperative effort and mutual assistance" for preventing air pollution and enforcing state laws relating to air pollution.[3]

Title I of the Act creates a framework for the prevention and control of air pollution from stationary sources. Within this statutory framework,[4] each state is to develop its own implementation plan for the prevention and control of air pollution. This statutory framework can be briefly described as follows.

The Administrator of the U.S. Environmental Protection Agency (EPA) is required to publish lists of each air pollutant, the emissions of which are believed to endanger the public health or welfare.[5] Within 12 months after a pollutant has been listed, the Administrator must issue air quality criteria for the pollutant.[6] Then, for each pollutant for which air quality criteria are issued, the Administrator promulgates national primary and secondary ambient air quality standards (the NAAQSs).[7] The primary standards are to protect the public health; the secondary standards are to protect the public welfare.[8] These standards are the key element, the focal point of the statute. Achievement of the NAAQSs is the goal, and each state is required within nine months after promulgation of the NAAQSs to prepare a plan or plans that will provide for the attainment and maintenance of the primary and secondary NAAQSs by the statutory deadlines.[9]

Each state has primary responsibility for assuring air quality within its entire geographic area.[10] For this purpose, the states are divided into air quality control regions (AQCRs).[11] A list identifying those AQCRs that do not meet the NAAQSs or are better than the NAAQSs require must be submitted to the EPA.[12] From this evaluation of the quality of the air within each AQCR, the states are able to prepare the implementation plans required by the statute.[13]

For each air pollutant for which an ambient air quality standard has been promulgated under the Act, a state implementation plan (SIP) must be adopted by the state and submitted to the Administrator.[14] This plan must provide for the implementation, maintenance, and enforcement of the primary standard in each air quality control region (or portion of a region) within the state. A plan that provides for the implementation, maintenance and enforcement of the secondary standard may be submitted separately or as part of the plan for implementation of the primary standard.[15]

Once the plan is submitted, the Administrator has four months within which to approve or disapprove it.[16] Under the language of the statute, the Administrator must approve the plan if it contains a series of itemized requirements. These requirements include emission limitations and schedules of compliance and certain other measures as may be "necessary." Among these measures are transportation controls, the preconstruction review of new sources, and air quality maintenance planning.[17]

In certain circumstances the Administrator may prepare a state plan.[18] In other situations, the Administrator may extend the statutory deadlines for compliance with the NAAQSs.[19]

The statute thus far has dealt with air quality standards for pollutants. In §111, new stationary sources of pollutants, rather than standards for pollutants, are the concern.[20] Standards of performance, which establish emission limitations for categories of pollution sources, are to be published by the Administrator for new stationary sources.[21] The states, under regulations prescribed by the Administrator, are to submit plans for establishing standards of performance for existing sources emitting neither "criteria" nor hazardous pollutants.[22] The Administrator has the authority to prescribe a plan for a state if the state fails to submit a satisfactory plan; likewise, the Administrator may enforce the provisions of the plan if the state fails to do so.[23]

Not all pollutants are subject to the NAAQSs. These include hazardous pollutants, for which the Administrator is authorized to set standards under Section 112.[24] The procedure for the control of hazardous air pollutants follows the same pattern as for "criteria" pollutants and new sources. The Administrator is required to publish a list of hazardous air pollutants for which the EPA intends to establish an emission standard.[25] Following public hearings, the Administrator must then prescribe an emission standard for each listed pollutant, unless the hearings indicate that a pollutant clearly is not hazardous.[26] Once an emission standard has been established, construction of new sources and modification of existing sources of the pollutant may not occur unless the Administrator finds that the source, when properly operated, will not violate the emission standard.[27] Further, emissions from existing sources must begin to comply with the emission standard no later than 90 days after the effective date of the standard.[28] Authority to implement and enforce emissions standards for hazardous air pollutants for stationary sources may be delegated to a state, if the state develops and submits to the Administrator a procedure for implementing and enforcing the standards and the Administrator finds the state procedure is adequate.[29]

Ultimate responsibility for enforcement of the Act remains with the Administrator.[30] Federal enforcement operates directly against the person[31] in violation of a SIP, emission standards, or other standards or requirements.[32] The Administrator is not authorized to proceed against a state even when violations of an applicable SIP are so widespread that they appear to result from a state's failure to enforce its plan effectively.[33] Note that assigning the enforcement role to the Administrator may require federal enforcement of state-adopted standards or limitations. These may be more stringent than the national counterpart, and not required by the Act.[34]

Two provisions of the Act attempt to coordinate a state's actions with those of other units of government. With respect to the implementation and enforcement of state implementation plans, the state must provide a process of consultation with general-purpose local governments, federal land managers, and regional councils of government.[35] This process is intended to assure adequate opportunity for these authorities to present their views prior to the adoption of measures affecting them.[36] A second provision states that each SIP must require that major proposed new sources or modified sources in a Prevention of Significant Deterioration (PSD) area and sources that might contribute significantly to air pollution in another state in excess of the NAAQSs give the other state written notice 60 days prior to the date on which construction is to begin.[37] Likewise, the applicable implementation plan must identify and provide notice to all nearby states of those major existing sources that are subject to the PSD provisions of the Act or that may cause or contribute to levels of pollution in excess of the NAAQSs in any AQCR outside the state in which the source is located.[38] Any state or political subdivision is authorized to petition the Administrator for a finding that any major source is polluting other states if the emissions will prevent attainment or maintenance of the NAAQSs by another state or interfere with the application of measures adopted by another state to implement the PSD requirements.[39] Even when a permit has been granted by the state in which a source is located, it is a violation of the applicable SIP for any source to be constructed or to operate if that source will adversely affect attainment, maintenance or PSD measures in another state.[40]

Part C of the Act, Prevention of Significant Deterioration of Air Quality (PSD), regulates major new and modified stationary sources in those regions in which the air is cleaner than the NAAQSs require.[41] The multiple objectives of the PSD policy are to minimize air quality deterioration in clean air regions while permitting stable, long-term commercial, industrial, and energy development. Rather than dictate a federal response to these sometimes conflicting goals, the Act provides a program in which state and local governments will determine, up to a certain level, how much air quality deterioration will be allowed.[42] Each applicable state implementation plan is to contain the emission limitations and other measures necessary, as determined under the requirements of Part C, to prevent significant deterioration of air quality in regions in which the air is better than the standards require.[43]

Three classes of PSD areas are identified by the statute. Except for certain designated areas, all PSD areas are to be classified initially as Class II.[44] For each class, the statute allows specific increments in pollution concentrations over the baseline concentration.[45] These allowable increments differ for each class, but no increase in any area may exceed the lower of the limits set by the national primary and secondary standards.[46] This limitation does place a ceiling on pollution increments in any class but may, in some instances, allow pollution to increase up to the secondary standards.[47]

A key element in allowing each state to balance clean air and growth is the provision for reclassification of PSD areas.[48] Certain national parks, monuments, and wilderness areas may be classified as Class I or II only.[49]

In these classes air pollution increments are lower than in Class III. All other areas may be reclassified as Class III if the statutory procedural and substantive requirements are met.[50] Preliminarily, the state must prepare and provide a satisfactory description and analysis of the health, environmental, economic, social, and energy effects of the proposed reclassification.[51] Notice must be afforded and public hearings conducted in areas proposed for reclassification and in areas that may be affected by the proposed reclassification.[52] The proposed reclassification must be approved by the governor and by local governments representing a majority of people in the affected areas. There must also be consultation with the appropriate legislative committees if the legislature is in session and otherwise with the legislative leadership.[53]

Apparently the state has almost unlimited authority to reclassify.[54] The Administrator may disapprove a reclassification only if a reclassification interferes with another area's classification or allowable increments, the procedural requirements have not been met, or the state is attempting to reclassify lands that are required to remain as Class I.[55]

Within all PSD areas, major emitting facilities[56] are subject to a series of preconstruction requirements.[57] These requirements apply to the construction of new facilities as well as the modification of existing facilities.[58] Compliance with all statutory requirements, standards, and limitations is assured by means of a permit system.[59]

Under this permit system there must first be an analysis of any air quality impacts projected for the area as a result of growth associated with the proposed facility.[60] This analysis may be conducted by the state or by any general-purpose unit of local government or by the applicant for the permit.[61] This analysis must cover the ambient air quality at the proposed site and in areas potentially affected by emissions from the proposed facility, and must include continuous air quality monitoring data.[62]

A public hearing must be held providing an opportunity for interested persons, including representatives of the Administrator, to appear and make presentations on the air quality impact of the proposed source and other relevant considerations.[63] The results of the analysis required by the Act must be made available at the public hearing on the application for the permit. A state permit is required for any major emitting facility before the facility can begin construction in any PSD area, including any federal land area.[64]

In addition to the analysis and public hearing requirements, the statute contains a number of preconstruction review requirements. The owner or operator of the proposed facility must demonstrate[65] that the facility will not cause or contribute to air pollution in excess of the allowable increments for any PSD area more than once a year, violation of the NAAQSs in any AQCR, or violation of any other applicable emission standard or standard of performance.[66] For each pollutant regulated by the Act that will be emitted from the proposed facility, the facility must utilize the best available control technology.[67] The owner or operator must also agree to conduct any monitoring necessary to determine the effect of emissions from the facility on air quality in any area that might be affected by the emissions.[68]

Another preconstruction permit requirement is that each state must transmit a copy of each permit application to the Administrator. The Administrator in turn will provide notice to the federal land manager and federal official in charge of any lands within a Class I area. If the Administrator or any federal official in charge of federal lands in Class I areas files a notice alleging and identifying adverse impacts likely to be caused by the proposed source, the construction permit may not be issued unless the owner or operator can demonstrate otherwise.[69] These federal officials and the Administrator do not otherwise have an opportunity for preconstruction review.

Part D of the Act contains state implementation plan requirements for AQCRs that are nonattainment areas.[70] Generally, this Part establishes the conditions under which new (or modified) major sources will be permitted in areas in which any air pollutant exceeds any NAAQS for that pollutant.[71]

In these areas, new sources are subject to emission offset regulations to be applied in two stages. Prior to July 1, 1979, EPA emission offset regulations are to apply.[72] In order to receive a permit to construct under these regulations, a major new source must first undergo a two-part analysis. First, each proposed new source, major or not, must be subjected to the SIP preconstruction review requirements to determine if it will meet all the applicable emission requirements in the SIP.[73] Unless the proposed new source meets these requirements, the construction permit must be denied.[74]

Additionally, major new sources[75] are subject to an air quality analysis to determine if they would cause or exacerbate a violation of a NAAQS.[76]

If the analysis shows that allowable emissions from a proposed major new source would cause a new[77] violation of a NAAQS, construction approval may be granted only if both of the following conditions are met. First, emissions from the proposed new source or emissions from existing sources or from both must be reduced below the allowable levels so that construction of the source will not cause a violation of the NAAQS. Second, the new emission limitations for both new and existing sources must be legally enforceable. For a new source, this is to be accomplished by making the new limitations a SIP requirement by inclusion as a condition of the permit. Reduction of emissions from existing sources must be made subject to a new SIP requirement to ensure that emissions will be reduced by a specified amount in a specified time.[78]

In cases in which allowable emissions from a proposed major[79] new source would exacerbate an existing violation of a NAAQS as of the proposed construction date, one of the conditions for approval is that the source must meet an emission limitation that specifies the lowest achievable emission rate for such type of source.[80] If the applicant owns or controls existing sources within the same AQCR as the proposed source, these must comply with applicable emission limitations and requirements of the SIP.[81] From existing sources in the area, regardless of ownership, emission reductions are required such that the total emissions from existing and proposed sources are sufficiently less than the SIP allows and represent reasonable progress toward attainment of the NAAQS.[82] This offset requirement must provide a net air quality benefit in the affected area.[83] Finally, if the proposed location is in an area in which the EPA has found that the SIP is substantially inadequate to attain a NAAQS, permits granted must specify that construction may not begin until EPA has approved or promulgated a SIP revision for the area.[84]

The Act provides for a waiver of the EPA emission offset regulations with respect to any pollutant if the Administrator determines that the state has an alternative program.[85] As part of an alternative program, the state must require an enforceable permit imposing emission limitations that meet the lowest achievable emission rate.[86] The permit must require all other major sources owned or operated by the applicant to be subject to and in compliance with emission limitations.[87] All existing sources must achieve a reduction in emissions no less than that obtainable through the adoption of reasonably available control technology. The program must also assure that total allowable emissions will be reduced at least to the level that would result from application of the EPA emission offset regulations.[88]

After June 30, 1979, no major stationary source may be constructed in any nonattainment area if the emissions from that source will cause or contribute to a violation of any NAAQS,[89] unless the SIP has been revised to comply with the statutory requirements for nonattainment areas.[90] To comply with the statute, the SIP must provide for attainment of the NAAQSs "as expeditiously as practicable" and, for the primary standards, no later than December 31, 1982.[91] Adoption of the plan must comply with procedural requirements of notice and hearing.[92] All reasonably available control measures must be implemented as expeditiously as possible, and reasonable further progress toward attainment of the NAAQSs is required in the interim.[93] Current inventories of emissions must be maintained, and those emissions that will be allowed to result from construction of new sources must be identified and quantified.[94] Other plan requirements include evidence of public involvement, an analysis of the effects of the plan's provisions and of the alternatives considered, permits for construction and operation of new sources, and financial commitments and legal authority necessary to implement the plan provisions.[95]

The permit program required as part of the SIP revision contains a statutory emission offset policy. It is similar to the emission offset regulation discussed earlier. A permit for a new source may be issued if, by the time the source begins to operate, total allowable emissions from existing sources in the region, from new sources which are not major emitting facilities, and from the proposed source will be less than the level of emissions from existing sources allowed under the SIP. This reduction must represent "reasonable further progress" toward attainment of the NAAQSs.[96] As an alternative to this offset policy, the plan must show that the emissions resulting from the proposed new source will not cause or contribute to pollution levels that exceed the allowance for such pollutants permitted from new sources under the plan.[97] Further, the new source must comply with the lowest achievable emission rate, and the owner or operator must demonstrate that all major sources owned or operated by him in the same state are subject to and in compliance with all applicable emission limitations and standards.[98]

A final section in Title I imposes limitations on federal financial assistance and other programs in order to achieve air quality standards.[99] This section applies to grants authorized by the EPA Administrator, including grants for the administration of air quality programs, and grants and approvals of projects by the Secretary of Transportation other than for safety, mass transit, or transportation improvement projects related to air quality. These grants must be withheld in any AQCR in which any NAAQS has not been attained, where transportation control measures are necessary for the attainment of the standards, and where the SIP has not met the statutory requirements for nonattainment areas.[100] The EPA Administrator may not make any grants authorized by the Clean Air Act if the state or any designated local government is not implementing any requirement of the SIP.[101]

In addition, federal agencies may not support or allow any activity that does not conform to the SIP. Metropolitan transportation planning agencies designated under the federal-aid highway act may not approve any project, program, or plan not conforming to the SIP.[102] Federal agencies and departments having responsibility for any program with transportation consequences relating to air quality must give priority in their programs to the implementation of the SIP's attainment and maintenance requirements.[103]

FOOTNOTES

1. Clean Air Act, §101(b)(1). [Unless otherwise noted, all sections cited are from the Clean Air Act], 42 U.S.C. §7401 *et seq.* (1977 Supp.).
2. §101(a)(3) and (4); 42 U.S.C. §7403. See also H.R. Rep. No. 294, 95th Cong., 1st Sess. 146 (1977) [hereinafter cited as H. Rep.].
3. §102(c)(1); 42 U.S.C. §7405.
4. See generally §§107 to 112; 42 U.S.C. §7407-7412.
5. §108(a)(1)(A); 42 U.S.C. §7408.
6. §108(a)(2); 42 U.S.C. §7408.
7. §109(a)(1); 42 U.S.C. §7409.
8. §109(b); 42 U.S.C. §7409.

9. §110(a); 42 U.S.C. §7410.

10. §107(a); 42 U.S.C. §7407.

11. §107(b); 42 U.S.C. §7407. The Air Quality Act of 1967 required that AQCRs be established throughout the country. This was accomplished by the early part of this decade. S. Rep. No. 252, 95th Cong., 1st Sess. 22 (1977) [hereinafter cited as S. Rep.].

12. §107(d)(1); 42 U.S.C. §7407.

13. §110; 42 U.S.C. §7410.

14. §110(a)(1); *Id.*

15. *Id.*

16. §110(a)(2); *Id.*

17. §110(a)(2)(A)-(K); 42 U.S.C. §7410.

18. §110(c)(1). If the Administrator promulgates a state plan under this section, it is not clear what measures must be or may be included and whether they may be enforced.

19. §110(e); *Id.*

20. See §§111(a) and (b); 42 U.S.C. §7411.

21. §111(b)(1)(B); 42 U.S.C. §7411.

22. §111(d)(1); 42 U.S.C. §7411.

23. §111(d)(2); 42 U.S.C. §7411.

24. §112; 42 U.S.C. §7412.

25. §112(b)(1)(A); *Id.*

26. §112(b)(1)(B); *Id.*

27. §112(c)(1)(A); *Id.*

28. §112(c)(s)(B)(i); *Id.*

29. §112(d)(1); *Id.*

30. §113; 42 U.S.C. §7413.

31. §113(a); 42 U.S.C. §7413.

32. See, e.g., §110(c)(1); §111(c); §112(d).

33. §113(a)(2); 42 U.S.C. §7413. See also Brown v. EPA, 521 F.2d 827 (9th Cir. 1975).

34. §116; 42 U.S.C. §7416.

35. §121; 42 U.S.C. §7421.

36. H. Rep. No. 564, 95th Cong., 1st Sess. 141 (1977) [hereinafter cited as Conf. Rep.].

37. §126(a)(1); 42 U.S.C. §7426.

38. §126(a)(2); *Id.*

39. §126(b); *Id.*

40. §126(c); *Id.*

41. See Part D and §110(a)(2)(D) and (E). This part of the statute is a response to a court order. In Sierra Club v. Ruckelshaus, 344 F. Supp. 253 (D.D.C.), aff'd per curiam, 4 E.R.C. 1815 (D.C. Cir. 1972), aff'd by an equally divided court, sub nom. Fri v. Sierra Club, 412 U.S. 541 (1973), a federal district court interpreted the purpose language of §101 (b)(1) ("...to protect and enhance the quality of the Nation's air resources") to require a policy of nondegradation. The decree provided little guidance for such a policy except to enjoin EPA to ensure that the SIPs would "...not permit significant deterioration of existing air quality in any portion of any state where the existing air quality is better than one or more of the secondary standards promulgated by the Administrator." Sierra Club v. Ruckelshaus, No. 1031-72 (D.D.C., filed May 30, 1972). The EPA regulations prepared pursuant to the court order were generally codified in the 1977 Amendments to the Clean Air Act.

42. H. Rep., *supra* note 2 at 146. The report indicates that the PSD measures are an attempt to allow those states that wish it the opportunity for substantial industrial development. Congress chose not to allow unlimited pollution in clean air regions up to the ambient standards. Such a policy would have assured that eventually the entire country would become uniformly polluted and would have put the states that wanted to maintain clean air at an economic disadvantage. In allowing some additional deterioration, the idea was to achieve maximum flexibility. *Id.*

43. §161; 42 U.S.C. §7471. See §110(a)(2)(D); 42 U.S.C. 7410. These are the regions identified under §107.

44. §162; 42 U.S.C. §7472. Certain specified parks and wilderness areas are to be originally designated Class I. All other areas identified pursuant to §107(d)(1)(D) or (E) are to be Class II areas.

45. §163(a); 42 U.S.C. §7473. At first the PSD requirements apply only to sulfur dioxide and particulate matter. However, the Administrator is required to promulgate PSD regulations for four additional pollutants and for any other pollutant for which a national air quality standard is subsequently issued. §166.

46. §163(b)(4); 42 U.S.C. §7473.

47. This may occur because allowable pollution increments are added to existing baseline levels.

48. §164; 42 U.S.C. §7474.

49. §164(a); *Id.*

50. §164(a)(2); *Id.*

51. §164(b)(1)(A); *Id.*

52. *Id.*

53. §164(a)(2)(A); *Id.*

54. The legislative history, S. Rep., *supra* note 11, at 29, 36, indicates that the primary authority for PSD is placed with the states. See also H. Rep., *supra* note 2, at 146-152.

55. §164(b)(2); 42 U.S.C. §7474.

56. §169(1); 42 U.S.C. §7491, defines the term "major emitting facility" to include any stationary source that emits or has the potential to emit 100 tons per year or more of any pollutant from a list of 28 categories of stationary sources.

57. §165(a); 42 U.S.C. §7475.

58. See §169(2)(C), incorporating by reference §111(a)(4); 42 U.S.C. §7491.

59. §165(a)(1); 42 U.S.C. §7475. Note that although this review procedure is required for the sources listed in the statute, EPA has the authority to add to this list. The state, of course, may use this review procedure for additional categories of sources. S. Rep., *Supra* note 11, at 31.

60. §165(a)(2) and (6); 42 U.S.C. §7475.

61. §165(e)(1); 42 U.S.C. §7475.

62. §165(e)(2) and (3); 42 U.S.C. §7475.

63. §165(a)(2); 42 U.S.C. §7475.

64. §165(a)(1); 42 U.S.C. §7475.

65. §110(j); 42 U.S.C. §7410.

66. §165(a)(3); 42 U.S.C. §7475.

67. §165(a)(4); §165(a)(8); 42 U.S.C. §7475.

68. §165(a)(7); 42 U.S.C. §7475.

69. §165(d); 42 U.S.C. §7475.

70. Conf. Rep., *supra* note 36, at 155-158. Experience has exposed a major flaw in the implementation of the 1970 Act: the failure to assess the impact of emissions from new sources of pollution on the ability of state plans to attain the NAAQSs by the statutory deadlines. The states often approved new sources of pollution, assuming that the statutory deadlines for the attainment of the NAAQSs were sufficiently distant that future emission reductions could be made to compensate for initial pollution increases. Congress, concluding that a formal mechanism was necessary to account for new source emissions within nonattainment areas, developed a comprehensive scheme for attainment of the NAAQSs and included stringent requirements as conditions for growth in nonattainment areas. S. Rep., *supra* note 11, at 55.

71. §171(2); 42 U.S.C. §7501.

72. Clean Air Act Amendments of 1977, Pub. L. No. 95-95, §129(a)(1), 91 Stat. 745. This section was not codified; all references to this section are references to the uncodified section as it appears in the 1977 amendments. For EPA's emission offset policy see 41 Fed. Reg. 55524 (1976).

73. *Id.* at 55528.

74. Note that a state or a local reviewing authority is not required to approve a source that meets the preconstruction review requirements, since §116 of the Act allows the states to set standards more stringent than the minimum federal requirements. For many reasons, a state or local authority might decide that allowing the new source would not in any case be in the best interest of the community. See *Id.* at 55525.

75. A "major" source is defined in terms of the amount of emissions per year. See *Id.* at 55528.

76. *Id.* at 55528. Of course, this second review procedure may be used by a state or local authority for any nonmajor source.

77. The regulations point out that instances of SIP inadequacy or nonattainment of the NAAQS are determined for established administrative boundaries such as the AQCR rather than for that precise area where the air quality problem exists. In other words, a SIP revision may be necessary for an AQCR on the basis of a localized violation of standards in a small portion of the AQCR. The remaining portion of the AQCR may be "clean." Hence, a source proposing to locate in this "clean" area could cause a "new" violation in the clean portion of the nonattainment area or contribute to the existing violation in the "dirty" portion of the nonattainment area. On the other hand, the source might not cause or contribute to a violation of the NAAQS at all. For this reason, the regulations suggest that decisions on proposed new sources should be made on a case-by-case basis.

78. *Id.* at 55528. The form of the SIP requirement may be a state or local regulation, a condition on an operating permit, a consent or enforcement order, or any other legally enforceable mechanism available to the state. *Id.* at 55530.

79. *Id.* at 55528. The regulations do not fully explain the phrase "allowable emissions from a proposed major source." Presumably, "allowable emissions" means "otherwise allowable" emissions, i.e., those allowed under an applicable §111 New Source Performance Standard (NSPS). This interpretation is supported by the Administrator's statement that the "lowest achievable emission rate" must not exceed any NSPS set under §111 of the Act. 41 Fed. Reg. 55526. This particular requirement applies only to those pollutants causing the proposed source to be defined as a "major" source, not to all the pollutants emitted from the source. Other pollutants may be treated in the same manner, if the reviewing authority deems it appropriate. *Id.*, n.2.

80. The lowest achievable emission rate must be based on a consideration of the most stringent limitation in any SIP and the lowest rate achieved for the type of source. Any applicable new source performance standard must not be exceeded.

81. *Id.* at 55529.

82. *Id.*

83. *Id.*

84. *Id.* See §110(a)(2)(H)(ii); 42 U.S.C. §7410.

85. §129(a)(2); 42 U.S.C. 7502.

86. §129(a)(2)(B)(i), see §173(2); 42 U.S.C. §7502.

87. See §173(3); 42 U.S.C. §7503.

88. §129(a)(2)(C); 42 U.S.C. §7502.

89. §110(a)(2)(I); 42 U.S.C. §7410.

90. *Id.*

91. §172(a)(1). A later attainment date for photo-42 U.S.C. 7502 chemical oxidants or carbon monoxide or both may be permitted if the SIP demonstrates that earlier attainment is not possible, despite the implementation of all reasonably available measures. The SIP must then provide a special permit program that requires an analysis of alternatives to the proposed source which demonstrates that the benefits of the proposed source significantly outweigh the environmental and social costs imposed as a result of its construction. A schedule for implementation of a vehicle emission control inspection and maintenance program, and other measures necessary to provide for attainment of the NAAQSs by 1987, must also be included.

92. §172(b)(1); 42 U.S.C. §7502.

93. §172(b)(2) and (3). §171(1) defines reasonable further progress as annual incremental reductions in emissions sufficient to provide for the attainment of the applicable NAAQS by the statutory deadline.

94. § 172(b)(4) and (5); 42 U.S.C. §7502.

95. § 172(b)(9) and (10); 42 U.S.C. §7502.

96. § 173(1)(A); 42 U.S.C. §7503. See note 93 *supra*.

97. Recall that the purpose of the emission offset requirement was to provide a formal mechanism for allowing growth to occur while attaining the NAAQSs. See *supra* note 70. If the state chooses a strategy other than an emission offset policy, it must show that the new source will not cause the allowance for new growth built into the state plan revision to be exceeded. Conf. Rep., *supra* note 36, at 157. See also §§172(b)(5) and (8).

98. §173(2) and (3); 42 U.S.C. §7503.

99. §176; 42 U.S.C. §7506.

100. §176(a); 42 U.S.C. §7506.

101. §176(b); 42 U.S.C. §7506.

102. §176(c); 42 U.S.C. §7506.

103. §176(d); 42 U.S.C. §7506.

APPENDIX B

Selection Criteria, Methodology, and State-By-State Review of Environmental Laws and Regulations Affecting Emission Density Zoning

SELECTION CRITERIA

The scope of this study does not allow examination of air pollution and land-use management programs in all 50 states. In order to maximize the effectiveness of research effort, ASPO focused its inquiry on six states that are believed to exemplify air pollution, land-use management, and administrative issues common to a much larger area. They can be considered "typical" states whose programs, regulations, and legal authorities are likely to be duplicated by other state programs under similar grants of regulatory authority. The sample states represent a geographic cross-section of the United States, and their air pollution and land-use management programs also represent types commonly found in a greater number of state programs than can be individually examined within the scope of this project. The six states are Alabama, Colorado, Illinois, Minnesota, New Jersey, and Pennsylvania.

These states show a large diversity of administrative structures for air pollution control. For example, Colorado and Alabama administer air pollution control through state departments of health. Pennsylvania, Illinois, and New Jersey have state departments of environmental management with specific air pollution control divisions. Minnesota has placed its air pollution control agency within a larger state pollution control agency, analogous to a state department of environmental management.

There is also considerable variation among the states regarding land-use control programs. Land-use control programs are important in using an EDZ air pollution control strategy because EDZ considers location, land-use area, and zoning factors as part of its management technique. Just as EDZ can consider land-use management in implementing regulations, land-use control programs can consider using EDZ as part of their own management techniques. Therefore, it may be possible to implement EDZ through a land-use management program if the air pollution control institutions or laws are incapable of accommodating an EDZ strategy.

Although only a few states have a land-use management program analogous to zoning on the state level, a number of states have special interest programs focused on a single aspect of development. A state may choose to exercise jurisdiction only over an environmentally-sensitive area, such as a shoreline or coastal wetland, or may choose to regulate only specific classes of development activity, such as power plants or large-scale industrial developments. Minnesota and New Jersey both have programs that manage shoreline areas and that may offer potential for EDZ techniques as part of a land-use management program; Alabama has a similar program for its coastal zone. Minnesota also has an energy agency responsible for approving large power plants.

These specialized programs represent a new trend in land-use control, where the police power originally granted by the state to local communities through zoning enabling legislation is recaptured by the state for specific types of developments and geographic locations. The rationale for such recapture is based on the limited resources available to local government to adequately assess the impact of such developments and the inability of local governments to consider extrajurisdictional effects of local approvals. Such state programs may be able to incorporate air pollution considerations into land-use management decisions, especially when the stated legislative purpose of such state programs involves environmental protection and management.

Finally, some of the states surveyed require environmental impact statements for state actions, including permit approvals for stationary sources of air pollution, which have a substantial effect on the environment. These actions must be reviewed and their impact assessed in comparison to alternative development proposals. These programs are similar to and modeled after the National Environmental Policy Act (NEPA)[1] and follow a similar administrative process of circulating environmental impact statements for comment among the public and government agencies. Such programs often additionally require public hearings for environmental impact statements regarding air pollution control. These mechanisms can offer opportunities for integrating EDZ considerations into the review process.

The air pollution and land-use programs of the six states are summarized in the following table.

State Air Pollution and Land-Use Controls

	State					
Type of State Program	Ala.	Colo.	Ill.	Minn.	N.J.	Penn.
Air Pollution Control						
Dept. of Health	X	X				
Dept. of Environment			X	X	X	X
Land-Use Management						
Coastal Zone	X			X	X	
Wild Rivers			X			X
Power Plant Siting					X	
State Land-Use Standards		X[a]			X	
Environmental Impact Statement				X	X	

[a] Only has advisory authority over local governments, by establishing standards for local land-use regulatory decisions.

METHODOLOGY

The following material examines the legal and institutional arrangements for air pollution control and land-use management within the six survey states. It is based on an examination of state constitutional and specific statutory provisions, and administrative regulations. The data are supported by personal telephone interviews with applicable state officials responsible for administering the programs and laws discussed below.

In determining relevant statutory and regulatory material, the researchers concentrated on those state programs thought to be most likely to influence the siting of facilities that would qualify as stationary sources of pollution under the EDZ technique. These included principally power plants, industrial developments, and large-scale commercial developments and excluded, for the most part, residential developments and transportation-related facilities (affecting mobile pollution sources). The programs and legislation examined were analyzed according to whether or not the state agency exercised regulatory jurisdiction over the siting of such a facility, to what extent it exercised such jurisdiction, and to what extent its decisions involved air pollution considerations. In some states, inquiries were also made as to possible coordinative linkages between various state agencies and between state and local levels of government, in order to determine how an existing state program could be coordinated with several emission quota strategies.

STATE SUMMARIES

Alabama

The Alabama Air Pollution Control Act of 1971 creates a division of air pollution control and an air pollution control commission within the Department of Health.[2] The Commission by regulation prohibits the construction, installation, modification, or use of any equipment, device, or other article which it finds may cause or contribute to air pollution or which is intended primarily to prevent or control air pollution without a permit issued by the Commission.[3] The Commission also may "establish such emission control requirements...as may be necessary to abate, prevent, or control air pollution" and the requirements may "be for the State as a whole or vary from area to area...in order to take account of varying local conditions."[4]

Applications for a permit are submitted to the Commission for review with special emphasis on whether the proposed activity would be in keeping with plans for the prevention of significant air quality deterioration. The Commission then coordinates the process with the Region IV Office of the U.S. Environmental Protection Agency, which must rule affirmatively on whether the proposed plans satisfy the Clean Air Act requirements for "best available control technology." The Commission uses a two-step permit process, incorporating a permit to construct and a permit to operate.[5] The Act also provides for a variance procedure,[6] where the Commission may impose conditions on its issuance of a variance under the air pollution standards and requirements. The Commission may also approve local programs for air pollution control if the Commission finds the local program is compatible with the purposes of the Act.[7]

The Air Pollution Control Commission, the Department of Solid Wastes, and the Water Improvement Commission are all within the Alabama Department of Health and all have some siting authority, depending on the proposed facility. The Solid Wastes Disposal Act[8] provides for permits for individuals or corporations to operate solid waste disposal facilities that otherwise would be operated by municipalities, for example.

No party has appealed the decision of the Air Pollution Control Commission not to issue a permit beyond the Commission level. The Commission has, in every case, upheld the recommendations of the state Division of Air Pollution Control concerning permit applications. An appeal concerning the handling of a permit may be taken within 30 days to the circuit court in the county having jurisdiction over the affected property.[9]

State land-use management is centered in the Alabama Coastal Area Board, which requires a permit for regulated activities within the coastal zone. A coastal construction permit must include a certification that a permit has been applied for (or is not required) from the Alabama Air Pollution Control Commission.[10] Without question, major air pollution facilities are included within the activities regulated within the coastal zone, and the certification of air pollution control compliance assures a strong level of coordination between the Alabama Coastal Area Board and the Air Pollution Control Commission.

Alabama also authorizes the creation of a State Industrial Development Authority, and Industrial Development Boards within individual municipalities.[11] Neither the Authority nor the Boards have any specific land-use regulatory authority or air pollution control authorizations. The privately organized Industrial Development Corporations similarly have no land-use or air pollution control regulatory powers.

Advisory regional planning commissions are authorized to assist local governments in comprehensive planning, but they have no specific land-use regulatory authority.[12]

Colorado

Colorado has a variety of statutes that affect air pollution control. A state Air Pollution Control Commission is created in the state Board of Health, under the Colorado Air Pollution Control Act of 1970.[13] The legislative declaration of the Act states that air pollution control is a "matter of statewide concern" and that the purpose of the Act is to "require the use of all available practical methods to reduce, prevent, and control air pollution" and "to maintain a cooperative program between the state and local units of government."[14]

The Act states that the Commission shall have maximum flexibility in developing effective air pollution control programs.[15] This grant of authority includes establishing air pollution control regulations for specified areas or zones of the state, in addition to establishing requirements for the entire state.[16] The standards adopted under these regulations may vary for different parts of the state, based on variations of altitude, topography, or meteorology, and may include specific area controls and describe varying degrees of contamination allowed within the specific areas.[17]

The Commission requires that a permit be issued for the "emission of contaminants from, or construction or alteration of, any facility, process, or activity except residential structures, from which contaminants are to be emitted," or for the construction or substantial alteration of any building, except single family residential dwellings, which will result in emissions.[18] The Commission uses a single permit for installation and operation, but the permit process is in two stages--preliminary and final approval. The Commission may impose whatever conditions it deems necessary to accomplish the purposes of the Act when it issues its permit. Although this implicitly may include density controls, the Commission has never issued an area requirement or any other EDZ strategy as part of its conditions. Standard conditions imposed on stationary sources include a maximum opacity of 20%, a process weight-loss restriction, and the imposition of federal New Source Performance Standards (NSPS) when applicable.

The state has its own NSPS, although it has not been delegated this authority by the U.S. Environmental Protection Agency. Only the state NSPS regulations are enforced by the state Air Pollution Control Commission.

Variances may also be granted by a Variance Board of the Commission.[19] The Board may grant a variance when there are findings that the "best practicable technology" is unavailable, that the application of the air pollution control regulations would constitute an "unreasonable economic burden" on an applicant, and that the issuance of a variance would be consistent with the policies of the state Air Pollution Control Act. The "unreasonable economic burden" requirement would be applicable if the Board or Commission finds that the regulation would result in a taking or the practical closing of any lawful business or activity without a concurrent public benefit.[20]

The state Air Pollution Control Commission may delegate its authority to local governments.[21] There are two avenues used in this delegation process: the state may designate a local air pollution control agency as meeting the standards of the Commission and allow it to control air pollution directly, or the state may contract with local governments for monitoring or enforcement services, while reserving permit authority in the Commission. For example, Denver is exercising air pollution control authority under its own home rule powers and receives funding directly from the U.S. Environmental Protection Agency to administer its own program independently of the state efforts. Local governments are allowed to exercise home rule authority provided they adopt a home rule charter.[22]

The commission receives referrals from the Colorado Land-Use Commission (CLUC), but not on a consistent or uniform basis. Informal relationships are also maintained between the Commission and the state Department of Agriculture for fugitive dust problems, and with the state's Oil and Gas Conservation Commission for geothermal exploration, although the Air Pollution Control Commission exercises no air pollution control jurisdiction over geothermal sources.

Particulates are also controlled under the Soil Erosion and Dust Blowing Act of 1954, which allows a Board of County Commissioners to consider certain actions when presented with a case of soil erosion affecting public roads or lands.[23] The county does not have permit or regulatory authority over such eroding lands, but may fine the landowner, or correct the dust blowing and charge the activities to the landowner. This program is independent of the state's air pollution control program.

Air pollution control issues also may arise before the Colorado Oil and Gas Conservation Commission under the Colorado Geothermal Resources Act,[24] where the commission must consider the effects of geothermal exploration on air quality when issuing a geothermal exploration permit. This program is also independent of the state Air Pollution Control Commission.

The Colorado Land-Use Commission identifies and establishes review criteria for "matters of state interest."[25] The "matters of state interest" are defined to mean an area of state interest or an activity of state interest, or both.[26] Although the Colorado Air Pollution Control Act defines air pollution as a "matter of statewide interest," there is no mention of air pollution emission sources as a "matter of state interest" under the Colorado Land-Use Act or CLUC regulations. The duplication of language between the two acts is considered accidental and does not indicate the establishment of coordinative or permitting activities between the Air Pollution Control Commission and CLUC.

CLUC does not require a state permit for defined matters of state interest, but rather establishes review criteria for local governments, which must issue their own permits for designated areas or activities of state interest. The powers of the CLUC are essentially recommendatory, and are binding on local governments that did not have zoning or land-use controls in existence at the effective date of the Act (in 1974). The only authority the CLUC has over local jurisdictions is the threat of litigation, should a local permit clearly conflict with a CLUC-adopted development guideline. The local review guidelines established by CLUC do not include air pollution control criteria, but require that a person proposing an activity of state interest obtain all necessary state permits in addition to the local permit issued under CLUC guidelines. The additional state permits might include a state air pollution control permit, if required independently by the state Air Pollution Control Commission.

Illinois

Air pollution control authority arises in Illinois under the state's Environmental Protection Act.[27] The Act creates, under Title II, an air pollution control program involving the state Pollution Control Board ("the Board"), the Illinois Environmental Protection Agency ("the Agency"), and the Illinois Institute for Environmental Quality ("the Institute"). All three administrative bodies are given specific tasks under the state's air pollution control laws; the state's Attorney General is also given a central administrative role in the air pollution control process.

The Institute has the most limited role of all the administrative bodies involved. The Institute is directed to provide an economic study to the Board before the Board adopts air pollution control regulations or makes significant alterations in existing regulations.[28] The Institute is also directed to fund technical research projects and sponsor directed research for the Board and Agency.

The Board is responsible for adopting air pollution control regulations,[29] hearing petitions for review of air pollution emission permits and regulations,[30] and enforcing permit requirements under its own regulations.[31] The Board can hold hearings to adopt regulations suggested by the Institute, the Agency, or citizen petition.[32] The Board also hears appeals from permit denials by the Agency,[33] and can grant variances to emission sources which cannot meet the standards and requirements of the Act.[34] Finally, the Board can hold administrative hearings on violations of the air pollution control laws and regulations, which can be brought before the Board by citizens, the Agency, or the Attorney General's office.[35] The Board can fine violators, based on findings made during the administrative hearing.

The Agency is responsible for administering the air pollution control program established under the Illinois Environmental Protection Act and under the regulations adopted by the Board. The Agency issues permits according to the regulatory standards,[36] and has the authority to deny an air pollution control permit, provided that it makes certain findings and informs the applicant of the reasons for the denial. The applicant may then appeal the decision to the Board.

Although the Board functions as a quasi-judicial agency, actions to abate air pollution emissions or enjoin polluters in violation of the Act or regulations can also be brought by the state Attorney General's office. Thus there are three avenues open to punish violators--a citizen can go before the Board, or can make a complaint to the Agency (which might bring an action before the Board, if the Agency finds that a violation has occurred), or can bring an action through the Attorney General's office, where the Attorney General can bring a suit directly in the courts or can bring the action before the Agency or Board.

The Agency is responsible for issuing emission control permits, under the Act and under the Board regulations. The permit can be conditioned to require periodic monitoring reports by the applicant or to mandate the use of pollution abatement equipment.[37] The Agency issues both construction and operating permits,[38] and identifies violations of state pollution standards through air quality monitoring.

The state air pollution control regulations establish performance standards for new and existing emission sources. Two sections of the regulations are noteworthy, because they contain an area requirement for incinerators, which cannot be located within 1,000 feet of residential development.[39]

The remainder of the regulations and standards use a weight-process limitation or total-emission-per-unit-time approach.

Local agencies can be directed by the Board to correct violations of the Act.[40] The Act allows local governments to develop their own air pollution control programs, which are run independently of the state program. Both the City of Chicago and Cook County (which contains Chicago) have their own programs, for example. The state provides technical assistance to local governments wishing to establish such programs on their own.

There is considerable informal coordination between the Air Pollution Control Division and other divisions within the Illinois Environmental Protection Agency. For example, the Air Pollution Control Division might notify the Water Pollution Control Division of a permit for a scrubber, which could be a point source of water pollution under the Federal Water Pollution Control Act of 1972. The Air Pollution Control Division probably would not tell an applicant about the requirements for federal permits under the water pollution laws, however. The Air Pollution Control Division has not been delegated the authority to enforce the federal New Source Performance Standards under the Clean Air Act, and enforces only the state performance standards. However, an application is pending before the U.S. Environmental Protection Agency to authorize the state to assume administration of the federal NSPS standards. Coordination between state agencies is promoted by the Illinois Environmental Protection Act, which requires that for any action by a state agency which will result in pollution, plans, specifications and cost estimates must be submitted to the Agency for review before the agency proceeds with the action.[41]

An Illinois Industrial Pollution Control Financing Authority[42] may issue bonds to finance loans to industry in order to allow the industry to purchase necessary pollution abatement equipment. The Authority earmarks its money for small businesses and has little functional coordination with the Air Pollution Control Division of the Illinois Environmental Protection Agency. The Authority has no jurisdiction over the siting of facilities or other stationary sources of air pollution.

The Northeastern Illinois Planning Act[43] and the Southeast Illinois Metropolitan and Regional Planning Act[44] create regional planning agencies whose major purpose is to provide assistance to local governments. Because of their advisory role, these agencies would not be involved in a siting process directly, although they may comment on requests for federal funds for facilities that may involve air pollution issues through the review process established under Circular A-95 of the federal Office of Management and the Budget (OMB).

Minnesota

The Minnesota Pollution Control Agency is authorized to "issue, continue in effect or deny permits, under such conditions as it may prescribe for the prevention of pollution, for the emission of air contaminants, or for the installation or operation of any emission facility, air contaminant treatment facility, treatment facility, potential air contaminant storage facility, or storage facility, or any part thereof, or for the sources or emissions of noise pollution."[45]

These duties specifically include collection, transportation, or disposal of solid waste; or the installation or operation of any system or facility, or any part thereof, related to the collection, transportation, or disposal of solid wastes. The definitions of what would be included in these various terms cover all considerations raised in this report.[46]

The Pollution Control Agency must set air quality standards after consideration of a broad range of circumstances.[47] It also must encourage the disposal of solid wastes under standards adopted to minimize air pollution. The agency may, after public hearing, grant variances from the standards if doing so would avoid undue hardship and still promote the reasonable application and enforcement of the law.

The Air Quality Division issues two types of permits: an installation permit before construction of a new facility, and an operating permit for existing and recently constructed facilities. The Division interprets "air polluting facilities" very broadly and excepts very few installations.

The state controls more rigorously the siting of power plants. The Director of the Minnesota Energy Agency is empowered to "undertake a continuing assessment of trends in the combustion of all forms of energy and analyze the social, economic, and environmental consequences of these trends" and to "require a certificate of need for construction of large energy facilities."[48] "Large energy facilities" include electric-power generating plants, single-site storage facilities for various quantities of petroleum and natural or synthetic gas, any petroleum refinery, any nuclear fuel processing or waste storage facility, any facility intended to be used for the combustion of specified amounts of fuel, and others."[49]

"No proposed large energy facility shall be certified for construction unless the applicant has justified its need. In assessing need, the Director shall evaluate: ...socially beneficial uses of the output of this facility, including its uses to protect or enhance environmental quality."[50] The Director is given broad administrative and executive powers, and the agency is given sole authority for the administration of those matters: "other laws notwithstanding, the authority granted the agency shall supercede the authority given any other agency whenever overlapping, duplication, or additional administrative or legal procedures might occur in the administration of [these sections]."[51]

The Minnesota Environmental Quality Board is given the authority to provide for siting of "large electric powered generating plants"[52] and shall do so "in an orderly manner compatible with environmental preservation and the efficient use of resources. ...and in a manner to minimize adverse human and environmental impact while insuring continuing electrical power system reliability and integrity."[53]

An applicant for a permit applies first to the Minnesota Energy Agency for a certificate of need if the facility is included in the definition of "large energy facility." A power plant siting group within the Environmental Quality Board then approves specific sites within the state. The Board then requires an environmental impact statement in many instances and public hearings on the proposed plan. The Board determines which agency prepares the environmental impact statement: the Pollution Control Agency often is the agency to prepare it. Then, after the Environmental Quality Board approves the site and related plans, the Pollution Control Agency can issue the appropriate permit. Although this permitting process advances step by step, in practice the evaluations frequently are performed simultaneously by the various agencies.

The certificate of need is based upon a 15-year forecast of supply and demand for power. The site determination is greatly influenced by whether the proposed site is within an "attainment" or "nonattainment" area as specified in accordance with the Clean Air Act. The Pollution Control Agency has not yet refused a permit because of significant air pollution problems in the planned area. It might be possible, for example, for a corporation to expand its facilities by installing "best available control technology" on the old as well as the new portions of the plant, thus decreasing the overall amount of pollution.

The Minnesota Department of Natural Resources becomes involved in the siting process if it significantly or potentially affects a body of water. This agency has authority:

> to provide guidance for the wise development of shorelands of public waters and thus preserve and enhance the quality of surface waters, preserve the economic and natural environmental values of shoreland, and provide for the wise utilization of water and related land resources of the state. 'Shoreland' means land located within the following distances from the ordinary high water elevation of public waters: (1) land within 1,000 feet from the normal high watermark of a lake, pond, or flowage; and (2) land within 300 feet of a river or stream or the landward side of floodplain delineated by ordinance on such a river or stream, whichever is greater.[54]

The Commissioner of the Minnesota Department of Natural Resources is required to issue standards and criteria for the preservation and protection of shorelands within the boundaries of wild, scenic, and recreational rivers under the Minnesota Wild and Scenic Rivers Acts.[55] If a proposed facility would be located within the specified distance of a watercourse or would significantly influence water quality, the Minnesota Department of Natural Resources also must issue a permit.

In addition, the Southern Minnesota Rivers Basin Board was created to help preserve the environmental integrity of the area and is empowered:

> to adopt guidelines and regulations to coordinate natural resources management so as to prevent the pollution, impairment or destruction of the air, water, land, or other natural resources located within the basin, assuming that the board's activities will not unnecessarily overlap or conflict with any similar activities authorized by the legislature and performed by established agencies.[56]

Two of the board's 11 goals are the "regulation of improvements and land development by abutting landowners of the bed, banks, and shores of [watercourses] or otherwise in order to preserve the same for beneficial use;

such regulation to be in accordance with the [other state standards and criteria]," and "regulation of construction or improvements on and prevention of encroachment in the floodplains of the [watercourses]; such regulation to be in accordance with [other state standards and criteria]."[57] Evidently this board has no powers to regulate the siting of point-source air pollution facilities which are not preempted by agencies with statewide jurisdiction.

The Industrial Commission of Minnesota[58] and the Department of Economic Development[59] have no land-use authorities related to siting of facilities. At the substate jurisdictional level, every city with a population greater than 50,000, or which has within its boundaries a port or harbor located on a navigable lake or stream, is authorized to create a Port Authority that may create an industrial development district to promote the sound development of land within its jurisdiction.[60] The provisions certainly would be preempted by statewide controls.

The Commissioner of Natural Resources "shall coordinate and supervise a local-state program for the establishment of lake improvement districts by counties and cities for lakes located within their boundaries based on state guidelines and regulations and compatible with all state, regional, and local plans where such plans exist."[61] It is unlikely indeed that these districts would have power to regulate the siting of large facilities.

At the jurisdictional level higher than the state, Minnesota is a signatory of the Great Lakes Basin Compact, promoted for the purpose of, among others,"...advis[ing] in securing and maintaining a proper balance among industrial, commercial, agricultural, water supply, residential, recreational and other legitimate uses of the water resources of the Basin." Under Article VII, each state agrees to consider the action of the commission in recommending "Cooperative programs for control of soil and bank erosion for the general improvement of the Basin" and "Diversion of waters from and into the Basin." Presumably, then, Minnesota then would have to consider these provisions in allowing a large facility to be sited near the shores of Lake Superior.

New Jersey

Air pollution control is administered by the Division of Environmental Control within the New Jersey Department of Environmental Protection, under the New Jersey Air Pollution Control Act of 1954.[62] The Act establishes a

Clean Air Council for the state, whose principal authority is to review the programs of, and make recommendations to, the Department of Environmental Protection (DEP) about air pollution control issues.[63] The principal operation and management of the state air pollution control program is within the DEP, and the Clean Air Council has little day-to-day contact with the program administration.

The DEP adopts and administers regulations for the control of stationary and mobile pollution sources.[64] DEP uses a two-permit system, with a separate permit for installation or operation of facilities likely to cause air pollution, and an operating certificate issued for five years for pollution control equipment. The statute specifically exempts one- and two-family dwellings or residential structures of six or fewer dwelling units, provided that the multi-family structure is owner-occupied, from the jurisdiction of DEP and the air pollution control program.[65]

DEP uses a two-stage review procedure when assessing permit applications. The department must determine whether or not the emissions will comply with the state standards, and whether the pollution abatement techniques are "state of the art." If both tests are affirmative, then a permit is issued. The state has been delegated authority by the U.S. Environmental Protection Agency to administer the New Source Performance Standards under the Clean Air Act. The department is just developing toxic substance standards to comply with the new Clean Air Act amendments, and is implementing an offset policy in attainment areas of the state. The state is also revising its State Implementation Plan under the Act.

A person who is denied a permit may request an administrative hearing before the DEP.[66] The hearing is held before a hearing officer and findings made, based on testimony presented. The hearing does not involve the state Clean Air Council.

The DEP may issue an order to cease violations, and can issue a notice of prosecution, if a violation is not abated.[67] Injunctions and penalties are permitted, and the DEP may request the state Attorney General to take appropriate action in the courts, if administrative orders of the agency are not complied with.[68]

The DEP has an advisory relationship with local air pollution control programs, and possesses no land-use control authority under the Act or under its regulations. DEP must, however, approve local air pollution control regulations, even if more restrictive than the state air pollution standards, provided the local regulations are not inconsistent with the purposes of the Act. An earlier statutory provision, repealed in 1967, allowed counties to establish their own air pollution controls under the aegis of a County Air Pollution Control Association, but this authority was recentralized in the state when the DEP was created in 1970.

The air pollution control section of the Department of Environmental Protection has established good informal relationships with other state agencies involved in land-use control. The Hackensack-Meadowlands Commission, administered through DEP, refers permit applications to the air pollution control agency when joint permits are necessary.

The DEP also coordinates its permit process with permit approvals under the New Jersey Coastal Area Facility Review Act.[69] The Coastal Area Facility Review Act (CAFRA) is a program established in the DEP and requires review of certain facilities if proposed in a defined coastal zone of the state.[70] The boundaries of the coastal zone generally define all nonurban coastal areas of the state.[71] The broad definitions of "facility" and "coastal area" essentially encompass all major stationary sources of emissions within all nonurban areas of the state near the coastal line.

The Act requires that a person proposing the construction of a designated facility within the coastal area apply for and receive a permit from DEP.[72] The application requirements for the permit involve the submission of an environmental impact statement, which includes the submission of data involving air quality impacts.[73] The DEP must then hold a public hearing and reach a decision on the application.[74] In order to approve a permit application, DEP must find that the facility complies with all state standards, including state air pollution standards.[75] Conditions may be imposed on a permit issued under the Act,[76] or the permit application may be denied. If denied, an applicant may appeal to a Coastal Area Review Board.[77] The Act also provides that penalties may be levied against development in violation of CAFRA and injunctions may be obtained against facilities being constructed without a DEP CAFRA permit.[78]

Pennsylvania

The Pennsylvania Constitution, in a provision adopted in 1971, provides:

> The people have a right to clean air, pure water, and to the preservation of the natural, scenic, historic, and esthetic values of the environment. Pennsylvania's public natural resources are the common property of all the people, including generations to come. As trustees of these resources, the Commonwealth shall conserve and maintain them for the benefit of all the people.[79]

The Department of Environmental Resources grants air pollution control permits: "No person shall operate any stationary air contamination source [as defined elsewhere in this section] unless the department shall have issued to such person a permit to operate such source in response to a written application."[80] That section also creates an environmental hearing board to "hear and determine all appeals from orders issued by the department in accordance with the provisions of this act." The department is empowered to grant temporary variances from the provisions of this act.[81]

The department maintains seven regional offices where permit applicants initiate state action. Following public notice and a two-week period for public comment on the planned facility, the regional staff reviews the application and within 6-8 weeks issues or denies plant approval--that is, a construction permit. Following construction and subsequent state review, the department then issues an operating permit.

Each regional office has an environmental coordinator who guides applicants through the permitting process, including other state agencies where applicable.

The Pennsylvania Department of Health may "adopt such rules, regulations, standards and procedures as shall be necessary to conserve the air, water, and land resources of the Commonwealth, protect the public health, prevent public nuisances, and enable it to carry out [its functions]."[82] This specific jurisdiction extends to facilities for the processing of solid wastes or for solid waste disposal[83] for which the department may issue rules and regulations.[84] However, all air pollution from facilities must be in accordance with the regulations of the Department of Environmental Resources.[85]

The Delaware River Port Authority has various powers to coordinate efforts with New Jersey to promote comprehensive planning.[86] The Authority has some limited land-use powers but no specific regulatory powers to restrict siting. In practice, most of the Authority's environmental concerns are with water pollution. For example, a statutory provision declares that:

> part of the area of the Delaware River Basin lying within this state is hereby established and declared to be a component part of an interstate region for the intergovernmental cooperation by [cooperating states] in the conservation, protection and development of the water resources thereof by means of integrated plans.[87]

The Pennsylvania Industrial Development Authority is authorized to assist industrial development agencies in promoting projects in critical economic areas.[88] These are undertaken in conjunction with the Redevelopment Area Economic Cooperation and Implementation Act[89] and the Industrial and Commercial Development Authority Act.[90] "Energy conversion facility" and "energy producing activity" are defined in the Industrial Development Act, but the act is aimed toward assisting with the financing rather than the siting of these new facilities.[91]

The Bureau of Conservation, Economics, and Energy Planning within the Public Utility Commission was created to conduct long-term studies of energy supplies and demands, among other functions:

> The Bureau shall review all proposals for electric and gas public utility plant expansion and shall submit for consideration of the commission its findings on what impact, if any, the electric and gas public utility plant expansion will have on rates charged by the public utility.[92]

The statute is silent about siting authority.

The Uniform Interstate Air Pollution Agreements Act authorizes the Department of Environmental Resources to cooperate and coordinate activities with other states to reduce the effects of air pollution within regional air masses.[93] These cooperative activities, however, do not substantially affect the siting of individual facilities.

FOOTNOTES

1. National Environmental Policy Act of 1969, 42 U.S.C. §4330 *et seq.* (1969).
2. Ala. Code title 22, §310.

3. *Id.* §310(18).

4. *Id.* §310(10).

5. Ala. Air Pollution Control Rules and Regulations §1.12.1.

6. Ala. Code §310(12).

7. *Id.* §310(15)(d)(3).

8. *Id.* §346 *et seq.*

9. Ala. Code title 8, §319.

10. Ala. Code title 22, §318(10).

11. Ala. Code title 44, §373(6)(q).

12. Ala. Code title 37, §814.

13. Colo. Rev. Stat. title 24, art. 7.

14. *Id.* §102.

15. *Id.* §106.

16. *Id.* §106(c).

17. *Id.* §107.

18. *Id.* §112.

19. *Id.* §115.

20. *Id.* §115(2).

21. *Id.* §125.

22. Colo. Const. art. 20.

23. Colo. Rev. Stat. title 34, art. 72, §101 *et seq.*

24. *Id.* art. 70, §101 *et seq.*

25. Colo. Rev. Stat. title 24, art. 32, §101 *et seq.*

26. *Id.* title 65.1, §102.

27. Ill. Ann. Stat. title III 1/2, §1001 *et seq.* (Smith-Hurd).

28. *Id.* title II, §1027(b).

29. *Id.* §1010.

30. *Id.* §1029.

31. *Id.* §1039.

32. *Id.* §1028.

33. *Id.* §1040.

34. *Id.* §1035-1038.

35. *Id.* §1042 *et seq.*

36. *Id.* §1039(a).

37. Ill. Pollution Control Board Rules and Regulations, Rule 100.

38. *Id.* Rule 103.

39. *Id.* Rule 203(e)(5), for Fuel Combustion Sources, where the standards are applicable to a combination of fuel combustion emission sources within a one-mile radius from the center of such combination of sources, and Rule 204(e) regarding sulfur oxide standards.

40. Ill. Ann. Stat. §1046 (Smith-Hurd).

41. *Id.* §1047.

42. *Id.* ch. 127, §721 *et seq.*

43. *Id.* ch. 85, §1101 *et seq.*

44. *Id.* §1152 *et seq.*

45. Minn. Stat. §116.07(4)(a).

46. *Id.* §116.06.

47. *Id.* §116.07.

48. *Id.* §116H.07.

49. *Id.* §116H.02.

50. *Id.* §116H.13(3).

51. *Id.* §116H.06.

52. *Id.* §116C.52(4).

53. *Id.* §116C.53.

54. *Id.* §105.485.

55. *Id.* §104.34.

56. *Id.* §114A.

57. *Id.* §114A.03.

58. *Id.* §175 *et seq.*

59. *Id.* §362.10.

60. *Id.* §458.

61. *Id.* §378.41.

62. *Id.* §N.J. Stat. Ann. title 26, ch. 2C.

63. *Id.* §3.2.

64. *Id.* §8.

65. *Id.* §9.2(a).

66. *Id.* §14.1.

67. *Id.* §14.

68. *Id.* §19.

69. *Id.* title 13, ch. 19, §1 *et seq.*

70. *Id.* §3.

71. *Id.* §4.

72. *Id.* §5.

73. *Id.* §7(a).

74. *Id.* §10.

75. *Id.* §§10(a) and 10(b).

76. *Id.* §11.

77. *Id.* §13.

78. *Id.* §18.

79. *Id.* §Pa. Const. art. 20.

80. Pa. Cons. Stat. title 35, §4006.1.

81. *Id.* §4013.5.

82. *Id.* §6001.

83. *Id.* §6007.

84. *Id.* §6009.

85. *Id.*

86. Pa. Cons. Stat. title 73, §3510.

87. *Id.* §815.31.

88. Pa. Cons. Stat. title 73, §301 *et seq.*

89. *Id.* §333 *et seq.*

90. *Id.* §371 *et seq.*

91. *Id.* §373.

92. Pa. Cons. Stat. title 66, §458.1.

93. Pa. Cons. Stat. title 35, §4102 *et seq.*

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16. ABSTRACT

Emission density zoning (EDZ) is an air pollution control strategy that sets emission limits for certain areas of land; these limits restrict the rate of pollutant emission per unit area (such as grams per second per hectare). This report examines legal issues involving EDZ. Many of the legal arguments applied to EDZ, and the conclusions reached, also may be applied to other types of land-use-based emission quota strategies, such as floating zone emission quotas, jurisdictional emission quotas, and district emission quotas.

EDZ can be considered as either a land-use or air pollution control technique; each interpretation raises different legal questions. EDZ probably would be upheld as a valid technique under the Clean Air Act and its amendments, but modifications of state air pollution control or land-use-management enabling legislation may be needed to ensure implementation. EDZ also raises constitutional questions of equal protection and due process, but these issues largely depend on the particular administrative mechanisms used to implement EDZ. Legal issues also may arise if EDZ is considered a pollution dispersal rather than a pollution abatement strategy. The legal questions concerning EDZ may best be resolved through explicit state enabling legislation that clearly delegates authority to local, regional, and state agencies, and establishes strong mechanisms for intergovernmental coordination.

17. KEY WORDS AND DOCUMENT ANALYSIS

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Land Use	Regulations	Due Process	
Land Use Zoning	Urban Planning	Emission Density Limits	
Law (jurisprudence)	Zoning	Emission Density Zoning	
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